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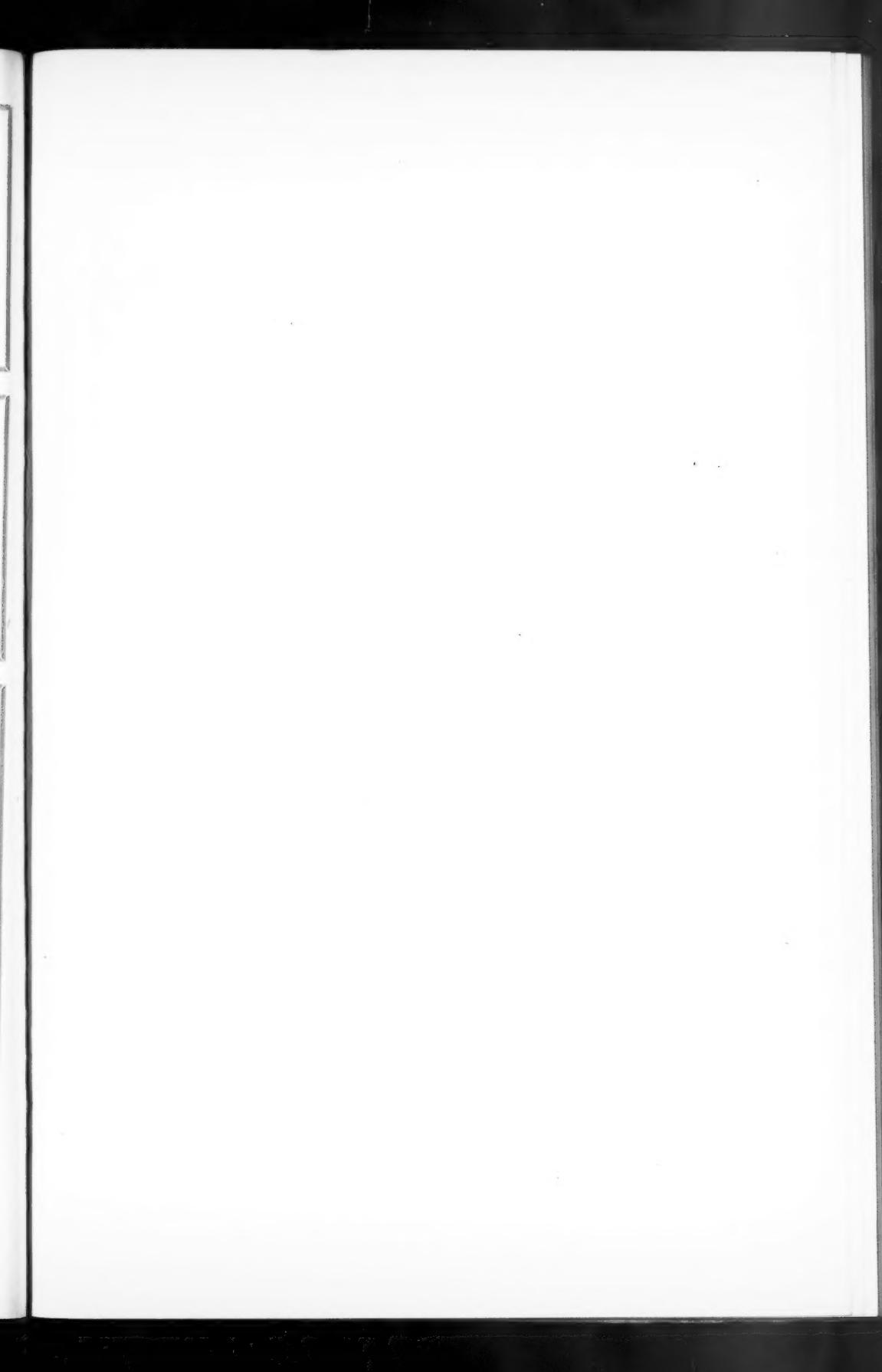
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DR. WALLACE CALVIN ABBOTT---1857-1921

FOUNDER AND PRESIDENT OF THE ABBOTT LABORATORIES

EDITOR-IN-CHIEF OF
THE AMERICAN JOURNAL OF CLINICAL MEDICINE

The American Journal of
**CLINICAL
MEDICINE**
Dependable Therapeutic Fact for Daily Use

Vol. 28, No. 8

August, 1921

Dr. Wallace Calvin Abbott, 1857-1921

IN the last issue of CLINICAL MEDICINE we announced the death of Doctor Abbott, which occurred early in the morning of July 4, 1921. We know that this announcement brought sorrow to thousands of readers of this journal; for, Doctor Abbott probably was known to more practicing physicians than any other man in the United States. He had many friends, because he was a friend to many. He was loved more, we believe, by those "on the firing line" than any other man of our profession.

Doctor Abbott had been in poor health for a number of years, and for the last two or three years he had been able to devote very little time to business. The management of his affairs had been turned over to lieutenants whom he had trained and whom he trusted; but, even in the later months of his life, he kept

in touch with the work of his office and he managed to come to the laboratories occasionally. On Friday, July 1, the day he was taken with the acute illness ending in his death, he came in for a few minutes, and he was then his old, genial, kindly, thoughtful, generous self.

Doctor Abbott was born on a farm at Bridgewater, Vermont, October 12, 1857. He was the son of Luther and Wealtha (Barrows) Abbott. His ancestry dated back to early colonial days in New England. His early life was like that of many other hard working farmer boys. Farming was a hard school but a good school, because it helped to give him his wonderful body and the tremendous physical endurance which later carried him through many a hard struggle. Following the common school, he attended the Randolph (Vermont) State Normal School and the St.

Johnsbury (Vermont) Academy, and took a short course at Dartmouth College. Later, he attended the University of Michigan and, in 1885, graduated from that institution with the degree of Doctor of Medicine.

He paid his own way at Randolph and St. Johnsbury. He sawed wood, did odd chores, waited on table at the students' club, and finally took charge of such a club and made it pay. At the University of Michigan, he did janitor service, nursing, and whatever else he could find to do. On another page, Professor Rocheleau, one of his old teachers, tells of his student life.

After completing his medical course, he returned to Vermont and for a few months assisted an older physician. He was so successful in his work that he was urged to remain with this doctor as partner and ultimate successor; but, he had decided to come to Chicago. Taking the few hundred dollars which he had accumulated in these few months of practice, he settled in Ravenswood, in 1886.

The writer has heard Doctor Abbott say that, after he had graduated at Michigan, he went to Prof. Victor C. Vaughan, whom he greatly admired, and asked his advice as to where he should locate—whether it would be better for him to go to the city or the country.

Doctor Vaughan said to him, "Go anywhere, Abbott—you will succeed wherever you go."

This advice was a strong factor in determining him to settle in Chicago.

On August 10, 1886, he was united in marriage with Miss Clara A. Ingraham, of Sharon, Vt. In 1891, they built a home at the corner of Hermitage and Wilson Avenues, and here Doctor and Mrs. Abbott have lived all their married life; here, their daughter, Miss Eleanor Abbott, was born on November 20, 1899.

In general practice, Doctor Abbott was immediately successful. When he was called to see a patient, he started at once, and he got there just as quickly as possible. He worked for and with his patients; and he worked hard. He did not believe in "letting nature take its course." All the time he was elaborating certain simple, fundamental principles which in later years he passed along to thousands of other doctors, and these principles made

for success. Never while the patient breathed did he say, "Nothing more can be done." And so he saved people's lives.

During his years of study at Michigan, he was greatly interested in a course of lectures given by Professor Vaughan on "Four Remedies and Their Active Principles." These remedies were nux vomica, digitalis, aconite, and opium. The writer has often heard Doctor Abbott say that those lectures were of more value to him than anything else in his entire medical course. He had taken careful notes, thought a great deal about these drugs and their application, and became imbued through and through with the idea that the use of the active principles was the solution of the problem of drug uncertainty.

About this time, we were beginning to hear in America about the French school of dosimetrists founded by the great Belgian, Burggraeve. An American company had put out some of the dosimetric remedies in a small way, and the idea fitted in so closely with what Doctor Abbott had learned from Vaughan and from his own experience that he began to use these little alkaloidal granules. He liked them and his patients liked them; but the time came when he could not get what he wanted when he wanted it; therefore, he decided to make his own. That was in 1891.

He first made active-principle granules for his own use exclusively; but he had found them so much more pleasant for the patient to take than the old fashioned drugs, so much more convenient to carry, so capable of accurate dosage, free from alcohol and uniformly potent, that it occurred to him that it might pay to offer these granules to brother practitioners. His first advertisement was one of four lines in *The Medical World*, in what would now be called the "Business Opportunities" column. It cost him 25 cents and brought him more than \$8.00 worth of orders.

Speaking of the early history of this business, Doctor Abbott once said: "I went about the thing in a very modest way, one helper at a time, and I remember well how puffed up with pride I was when my force had grown to five or six good girls, all of whom, not gone to homes of their own, are with me today. Knowing what I wanted for myself, I made the best granules I could; and I believe they

were as good as could then be made."

In a short time, the business grew so large that it was moved into a nearby house occupied in part by a private family. Soon, the family was crowded out, and the house itself was enlarged, added to, and finally torn down and replaced by larger buildings.

For several years, Doctor Abbott conducted the business under his own name; but, in 1900, it was incorporated as THE ABBOTT ALKALOIDAL COMPANY. In 1914, the name of this corporation was changed to that of THE ABBOTT LABORATORIES, which it now bears.

In 1894, Doctor Abbot established the THE ALKALOIDAL CLINIC. He said, in his opening editorial in this little journal, "For some years, there has been a widespread demand for current literature devoted to a discussion of the ways and means of alkaloidal medication." It was to meet this need that the CLINIC was created. The name "ALKALOIDAL CLINIC" had been used, for a few months prior to its adoption by Doctor Abbott, by Doctor Thackeray and his colleagues of the Metric Granule Company, but it had been dropped. Doctor Abbott revived it. For the early history of this movement and the birth of THE ALKALOID CLINIC, we refer to Doctor Thackeray's letter, published elsewhere in this number.

THE ALKALOIDAL CLINIC, a little 16-page journal, was distinctly a practical journal. There was little theory, no padding and a lot of mighty helpful stuff. It was this helpfulness that made it immediately successful. It is interesting to note some of the papers published in this and succeeding issues. There were papers on "Infectious Diseases," by Dr. W. C. Buckley, Philadelphia; on "Heart Tonics," by Dr. Wm. F. Waugh; on "Alkaloidal Granules," by Dr. J. D. Justice; and on "Aconitine" by Dr. John M. Shaller. From the very beginning, the CLINIC was "different" from other journals—it was a practitioners' journal, and distinctively a magazine for real men.

Early in the history of the CLINIC (in 1879), Dr. William F. Waugh, one of the founders of the Medico-Chirurgical College of Philadelphia, became one of its editors and, through the scintillating brilliancy of his pen, his convincing power as a speaker and teacher, and the keen-

ness of his therapeutic knowledge, he contributed much to the upbuilding of the journal. For years, Abbott and Waugh were associated in the literary and educational phases of the alkaloidal work. Doctor Waugh retired from active connection with the Journal some few years ago, and died on September 5, 1918.

The CLINIC grew rapidly in size and in circulation, becoming, in a few years, one of the most influential medical journals published. Throughout its history, it has taken as its keynote the idea instilled into it by Doctor Abbott of giving the doctor "on the firing line" the help which he actually needs, and giving in such a way that he can grasp it quickly and use it practically. In January, 1907, the name of the journal was changed to THE AMERICAN JOURNAL OF CLINICAL MEDICINE—not because Doctor Abbott or his associates had outgrown the alkaloidal ideas, but because it was felt necessary to widen the field so as to cover all the activities of the general practitioner. How successful it has been in that effort, is for the readers of CLINICAL MEDICINE themselves to say.

Doctor Abbott's medical philosophy was a simple one, and it is epitomized in epigrams, in short, pithy statements of fact which will live as long as medicine itself lives. Such sentences as "Clean Out, Clean Up and Keep Clean" have brought home to thousands of physicians the *simplicities* of medical treatment. Who can forget such sentences as: "The smallest possible quantity of the best obtainable means to produce a desired therapeutic result;" or, "Do not treat 'named diseases'; diagnose closely, and meet underlying pathological conditions with the right remedy in a positive, active form and in small dose, repeated, at intervals to effect—remedial or physiological;" or his, "Essential success points in the treatment of the sick":—"To equalize the circulation, eliminate waste, stop autoxemia, maintain systematic asepsis, stimulate innervation, and feed the tissues." This is truth in a nutshell. The doctor can remember these things at the bedside when some thought-dispelling emergency has erased from his memory the advice of his textbooks as to the method of treatment for such a case. If he keeps in mind Doctor Abbott's simple epigrams, he is not likely to go far astray.

The Doctor applied this fund of practical

knowledge, actually acquired at the bedside, in the preparation of many of the remedies which he sold. Many of the most successful preparations put on the market by THE ABBOTT ALKALOIDAL COMPANY were those which he had devised, himself, in association with a growing group of medical colleagues that soon surrounded him. With the help of Waugh, Candler and others, he got out remedies which were unique. He was never a copyist. His work in this field, as in every other field, was original and distinctive. Nearly every Abbott remedy was a good remedy. While of course, they were not all equally good, the average was exceedingly high.

Doctor Abbott was quick to recognize the changes going on in medical practice, and he never hesitated to adjust his ideas and his business to the spirit of the times. Therefore, when biologic preparations came into the foreground, he presented them to his customers and gave them the weight of his endorsement. Early in the history of the business, he realized the importance of supplying the physician with the best-possible chemicals and drugs of all kinds; so, he began the manufacture of alkaloids and active principles "from the ground up," later he produced definite chemicals, beginning with the sulphocarbonates which he, in association with Doctor Waugh, had already placed upon the medical map, and the value of which is now almost universally recognized. In later years, THE ABBOTT LABORATORIES has taken a prominent place in the manufacture of finer synthetic chemicals, and this was with Doctor Abbott's full approval, endorsement and help.

Doctor Abbott had a wonderfully magnetic personality. Whenever he went into a room, his presence was immediately felt. He was a big man wherever he happened to be. He had definite ideas, which he expressed freely, frankly, and even boldly; and he always obtained a respectful hearing. While he was fearless and aggressive, his attitude towards others was always sympathetic and generous. He was tolerant of the opinion of other men, and everything he did showed that he was sincerely anxious to weigh every idea and to think the thing and do the thing which was best. This was one of his "ethical principles:" "Think right, feel right, be right, live and let live; do the square

thing, have a conscience and use it." He believed in "the square deal," and he lived it. The result is that, when he passed away, although he had been through many struggles, some of them bitter, he left no enemies, only friends, while many mourn his loss today who in other days condemned him, struggled against his ideals and fought him.

The alertness of his intellect was astounding. In conversation, he would make a "short cut," mentally, and arrive at the conclusion of an argument before it was half completed by the speaker. His pocket notebook was usually in his hand or on the desk or table, and he would jot down in it words, ideas, suggestions, upon the inspiration of the moment. Later, these notes were translated for his colleagues and employes and "put to work" through all kinds of channels. The broadness of his intellect has been properly referred to by others.

The Doctor was an unusual public speaker. He seemed to know just what to say, and just when to stop. He had a fund of witty stories with which he interlarded his remarks. In debate, he was never bitter. He often rose to heights of real eloquence, and this is particularly true in things that touched his heart, as so many things did. The writer will never forget a talk which the Doctor gave at the home of Mr. and Mrs. G. D. Ellyson, of Des Moines, Iowa, on the occasion of the meeting of the American Association of Pharmaceutical Chemists in that city. We were guests at Mr. Ellyson's beautiful home, and Doctor Abbott was asked to make a few remarks, thanking our hosts for their entertainment. He took the occasion to talk about the meaning of husband and wife to each other, especially with passing years. It was one of the most beautiful things the writer has ever heard. Since then, Mrs. Ellyson has passed away, and now that Dr. Abbott himself has gone from us.

Doctor Abbott's "play" was in his work. He loved to entertain, each year, students of the graduating classes of Chicago's medical schools. Many of the doctors now in practice will remember the good times they had at "Abbott's." The Doctor was at his best on these occasions for, it gave him great pleasure to see the boys and girls enjoy themselves. One of his favor-

ite poems which he usually alluded to at these "student banquets" was this:

Pluck Wins

"Pluck wins: it always wins: Though days be slow
And nights be dark 'twixt days that come and go,
Still pluck will win; its average is sure,
He gains the prize who will the most endure;
Who faces issues; he who never shirks;
Who waits and watches, and who always works."

Many people who visited THE ABBOTT LABORATORIES have remarked upon the spirit of happiness, if we might call it that, which seemed to prevail throughout the plant. There were smiles everywhere. Everybody seemed to be anxious to help. There was a spirit of cooperation that could be felt even by the casual visitor. It is not too much to say that this was the spirit of Doctor Abbott himself, which somehow found its way to every nook and corner of his business and into the hearts of even the most humble of his associates and employees. And his helpful, courageous, industrious spirit of cheerful work and cooperation is a cherished heritage that the Doctor left to us who remain to carry on his work.

While, in his active years, he was "The Busy Boss," turning up everywhere at all times, working more hours than anybody else in this plant, yet he always had a kind word for everyone, or at least for everyone who deserved it. He was always interested in the affairs of those around him, and he was anxious to help in their difficulties. No one could be more kind than he, and he was repaid with confidence and affection. How many he has lifted, with a kindly word or by a practical help, from some slough of despond, no man knows, because these were the things Doctor Abbott kept to himself; but, each of us who remain knows of such cases, and the aggregate runs into large numbers. Since Doctor Abbott's death, many letters have come to us expressing this feeling. The following tells the story:

"Quite by accident—because I have been away from home for the last day or two—I saw in yesterday's Chicago paper the notice of Doctor Abbott's death.

"Now that I am writing, what can I say? What is the use of saying anything in the face of death? He was a friend of the best kind to me all the years that I knew him. Can I forget that he lifted me out of the pit, and made a new man of me, not only

by his generous help, but by his steadfast faith in me when I had none in myself, and by his inspiration? How can one man say more of another? I wonder how many more can say the same thing about Doctor Abbott!"

For a number of years, Doctor Abbott has been failing in health. Years ago, he had suffered from attacks of typhoid fever and inflammatory rheumatism. While his recovery from these seemed to be complete, yet it is probable that they left behind the beginnings of the chronic disease of the kidneys to which he finally succumbed. If he had been a man who spared himself, it is probable that he would have lived to a ripe old age; but, for years, he carried tremendous burdens, and he worked night and day as few men can work. How he could do this was a mystery to all of us; but, he did it.

The time came, however, some years ago, when his health began seriously to give way. Even then he kept on, although he was working by a supreme effort of the will. There would be periods, at first short, in which he would have to yield and rest. With his tremendous vitality, he "came back" from these quickly at first, but from year to year these periods of ill health became more prolonged, and recuperation more slow.

Although the Doctor did not talk about his failing health, he knew what was coming, and had prepared for it. His business was carefully organized; details which he had heretofore handled himself were gradually passed over to others; the responsibilities of his lieutenants were enlarged, so that, for several years before his death, he had so adjusted affairs that he felt he could go and come as he wished. He was ready for the call!

Doctor Abbott was a member of the Methodist Episcopal Church and a truly religious man. His faith went farther than belief in his fellow man; he trusted them and loved them; and he showed this in his works. To him, life was a gift to be wisely used in the service of the Master and of his fellows. *Service* was to him of far greater importance than money—and money he only valued for what of good it would do.

This article is not one man's opinion of Doctor Abbott; it is the composite thought

of his colleagues, associates and employees. To all of them—to all of us—he was a dear companion and friend. Although he is gone, yet his spirit will remain with us. The work he has done, because it has been built upon truth, and love, and the desire to be helpful, rests upon a secure foundation. It will live and grow bigger and better as the years go by. It must do so to be a worthy monument to his name.

We are reminded of Doctor Abbott by Robert Browning in these lines:

"One who never turned his back, but marched breast forward
 Never doubted clouds would break,
 Never dreamed, though right were worsted,
 wrong would triumph,
 Held, we fall to rise, are baffled to fight
 better,
 Sleep to wake."

In the wonderful perspective, which only time can paint, Dr. Abbott's work will loom even larger than his great personality which we now recall. His name shall occupy a niche in medical history, and the truths he sought to teach will remain an inspiration to those acquainted with his work.

The memory of his kindly smile is the benediction he leaves for those who knew him best. With Tennyson, we say:

"In words, like weeds, I'll wrap me o'er,
 Like coarsest cloths against the cold:
 But that large grief which these enfold
 Is given in outline and no more."

Professor Rocheleau was Doctor Abbott's teacher, many years ago, and, thus, has known him virtually all his life. In the following, Professor Rocheleau gives an attractive sketch of Abbott the student.—

[Ed.]

Nestling among the hills of the Green Mountains, on the banks of a sparkling stream; lies the little village of Bridgewater, Vermont. On a farm near by, Wallace Calvin Abbott was born, and here he lived during the first twenty years of his life, attending the village school and working on the farm.

In September, 1877, just at the dawn of his young manhood, he entered the Vermont State Normal School at Randolph. The school was not large, numbering about one hundred and fifty students, most of them sturdy young men and women from farm homes in adjoining counties. In a school of this size, however, opportunities for leadership are no less frequent than in larger institutions, and those qualities

which enabled the Doctor to attain his great success in later years were soon recognized by the students and the faculty.

A thorough scholar, the Doctor was never satisfied until he had mastered the subject in hand. Moreover, his ability to think his problems through to the end, coupled with his fund of common sense, enabled him to apply the underlying principles of the various branches of study to the affairs of everyday life in the most practical manner. His explanations and illustrations were clear, original and often unique. This power gave him a foremost place in his classes, where, not infrequently, he was as helpful to his fellow students as the teacher in charge.

Doctor Abbott was always a keen observer, a clear thinker, a forceful and logical reasoner. In his school days as well as in his mature years, he was a fluent speaker and a ready writer. Gifted with an imagination of rare power and possessed of boundless enthusiasm, he projected his plans far into the future—a future filled with the beautiful and the true, in which his life would be devoted to the welfare of humanity and to making more abundant the lives of those upon whom his influence fell.

Not only in scholarship was the Doctor a leader. In the student organizations and in those movements having for their purpose the general uplift of the student body, his ability as an organizer and counselor gave him a prominent place. He was always at the front in all good works.

But, in the estimation of the writer, the most valuable of all his characteristics was, his love for his fellowmen. His great heart overflowed with good cheer. Were a fellow student ill, despondent or falling behind in his studies, in Wallace Abbott he always found a friend whose kindly sympathy, good cheer and wholesome advice gave him brighter view and renewed energy.

During his student life, the Doctor spent a number of winters teaching, and fortunate were the boys and girls who came under his instruction and were inspired by his enthusiasm and ideals. Just as he inspired hundreds of young people in Ravenswood to make the most of the talents they possessed, so he stimulated his pupils to attain the highest possible good. As a teacher, advisor and friend, he was greatly beloved by his pupils. Of all the graduates of the Randolph Normal

School, during the seven years that the writer was associated with it, Dr. Abbott, without a doubt, became the most widely known and his work is the most far reaching.

After completing his studies at the Normal School, the Doctor entered Saint Johnsbury Academy to prepare for the Medical School of Dartmouth College. Although he became a member of a larger student body upon entering the Academy, he suffered no loss of prestige as a leader. Wherever he went, his kindness, good cheer and enthusiasm were irresistible.

Because he developed the endowments bestowed upon him by an All-Wise Creator, because of his indefatigable energy, and because he persistently followed the highest ideals in his profession, Doctor Abbott's contributions to medical science will be of lasting benefit to the world.

Chicago, Ill. W. F. ROCHELEAU.

[In the following, we reproduce portions of the numerous letters that we have received from many of the men with whom Doctor Abbott was associated, during years of intensive activity, in various ways. There are letters from physicians, from members of the American Medical Editors' Association, from officers of manufacturing chemists' houses, and of other concerns with which he had had business dealings. Then, there are letters from practicing physicians, from scholars and from just private citizens. All of them unite to do honor to the memory of this great man who had worked so enthusiastically for the advancement of the medical and pharmaceutical professions, to the end that suffering, ailing mankind might be benefited thereby.—Ed.]

As is well known, I was the first, with Dr. C. C. P. Silva and Dr. John C. Harper, to bring alkalometry largely to the notice of the medical profession and Doctor Abbott was about my first convert. I made up several private formulae for him, and I, with Doctor Silva, translated and published the first book by Doctor Burggraeve that was printed in the United States.

Some time after my acquaintance with Doctor Abbott had begun, I had some misunderstanding with my associates; I resigned from the concern and sold my interest.

Doctor Abbott had made a contract with

me which my former associates refused to carry out and, with his characteristic impulsiveness, he told them that they had awakened a sleeper and that in the near future they would be sorry for it. It was now that I furnished him with formulae that he had manufactured for him by Messrs. Morrison, Plummer and Company, of Chicago, and THE ABBOTT ALKAЛОIDAL COMPANY was born.

I had organized a new concern and then published for the first time THE ALKAЛОIDAL CLINIC; however, our concern fell into bad times.

Just at this time, the Columbian Exposition was on and I was appointed Superintendent of Chemicals and Pharmaceuticals in the Department of Manufacturers. While so employed, I met Doctor Abbott on the street and he asked me what I intended to do with THE ALKAЛОIDAL CLINIC? I answered promptly: "Give it to you, because I know that you will make it go."

In 1904, I became a part of THE ABBOTT ALKAЛОIDAL COMPANY, and, in 1911, Doctor Abbott and I talked over a prospective trip to South America with the intention of establishing an agency there. However, unfortunately, after the meeting of the A. M. A., in Los Angeles, I took the Texas fever, resigned my post and came south.

No man knew the inner Doctor Abbott better than I and none loved and admired him more.

He lived to realize our dream of the manufacture of the fine alkaloids and synthetics, formerly made abroad. Now, as I look upon the past, I remain to wish *Requiescat in pace* to Drs. Wallace C. Abbott, Silva, Pixley, Waugh, Lanphear and other branches of the tree, leaving me alone as the trunk. But, new branches are growing and may we say: Doctor Abbott's work will continue along the lines that he builded and the success that he attained will be continued.

W. T. THACKERAY, M. D.
Fowlerton, Texas.

It has been my privilege, and extreme pleasure to begin an intimate acquaintance with Doctor Abbott about thirty-five years ago, very close to the beginning of his career.

I have never seen a man so considerate and thoughtful of others, at all times. He instantaneously and intuitively knew

what his intimate associates and the general business public needed and required to improve themselves, and he always acted at once and did that which was good for his friends, if not always for himself.

Doctor Abbott was a man of action, and nothing was too much to do for his friends or for his following of many thousands of physicians. His mind was big, but his heart was always bigger. He has built up a great business that will remain a credit to his name for generations to come.

To have this man for a friend, was a great privilege. Today, many of us would have been greater in medical life, could we have followed his prophetic suggestion and his clean-cut estimations of his associates and intimate friends.

As to the general medical public, we have lost a generous man, whose sole object was, to furnish the means for us to help the sick; and, he did this as no one else could. Doctor Abbott was my friend.

JOHN M. SHALLER, M. D.
Cincinnati, Ohio.

—
A great force has gone out of the world. A dear friend will be missed by many hearts. A leader to whom many looked for inspiration has fallen by the way. But, the cause to which he gave his life will go on. His tireless energy was devoted to the service of mankind. Be it ours to go on with his work, and to honor his memory.

It is good to be numbered in the list of friends of such a man as Doctor Abbott. We, both of us, came from the same hill country of Vermont and, for thirty years, I have followed his course with interest, and shared with you in pride in his accomplishments.

JOHN MARSHALL FRENCH, M. D.
Milford, Mass.

—
I have known Dr. W. C. Abbott for a number of years and learned to appreciate his sterling qualities and high professional ideals. In a period when a very vicious tendency to therapeutic nihilism and the operative itch unduly obtained, he was conscientiously and deeply devoted to therapeutic ideals. To this feeling, the growth and development of his laboratories was due, not merely to pecuniary profit. While not hostile to bacteriologic developments, he maintained a critical scientific attitude toward its exaggerations. To the patent monopolistic tendencies of the bacteriologic

school he was opposed. In his attitude toward salvarsan, he manifested this tendency. He did not deny its value but decried the extravagant claim made for it, and especially the exaggerated claims of originality. He did justice to the old therapeutic effects of arsenic conjoined with mercury in syphilis. As a therapist, his mental attitude was judicial and conservative. He had very marked social qualities which endeared him to numerous friends.

JAS. G. KIERNAN, M. D.
Secretary, the Chicago Academy of Medicine.
Chicago, Ill.

—
To those of us who have reached or passed the meridian, the years pass swiftly by, often bringing to us the sad and unexpected news that another friend has passed away.

It was while attending the World's Fair, in Chicago, in 1893, that I first met Doctor Abbott. The first copy of his ALKALOIDAL CLINIC had, as a sample copy, been mailed to my address. Myself and wife were the guests of one of Mrs. Lawrence's old school-day friends, living in Ravenswood, and not far from Doctor Abbott's office; so, I strolled over to call upon the editor of this new twelve-page medical journal. He was in his office and gave me a hearty welcome. Soon we were "boys again," especially after discovering that the good old University of Michigan was Alma Mater to both of us. We passed the forenoon in visiting his patients.

I immediately discovered in him the qualities of the big man which the years have proven him to be. In fact, it is not too much to say that he possessed professional and business qualities rarely united in men of our profession.

That was the beginning of a friendship which has terminated only with his death. Not a copy of his journal, since its first, has failed monthly to arrive at my office, always bringing with it medical information useful to physicians. I have seen it grow from its small beginnings up to its splendid proportions and its excellent reputation among medical journals of the day. He and his able staff have placed it in the front and I hesitate not to say that it is to the ALKALOIDAL CLINIC and its successor CLINICAL MEDICINE that the medical profession of America is indebted for its knowledge of the value of alkaloidal medi-

cation. To truthfully say so, is indeed a rare and honorable compliment.

Doctor Abbott was a man of kindly and genial temperament. Mrs. Lawrence and I shall not forget the letters of sympathy and solicitude sent by Doctor Abbott and Doctor Waugh to my wife while I lay for weeks almost at death's door with septic infection. Neither shall I forget invitations from each of them to spend as their guest a vacation upon the shores of Lake Michigan and of the Gulf.

"There is no death! What seems so is transition.

This life of mortal breath
Is but a suburb of the life Elysian,
Whose portals we call Death."

V. E. LAWRENCE, M. D.

Ottawa, Kan.

By Doctor Abbott's death, the medical profession loses an ardent champion and an honest coworker, and it leaves an opening which in my opinion will never be filled. Doctor Abbott carved his own niche in the medical world and has filled it acceptably to all.

J. D. ALBRIGHT, M. D.
Philadelphia, Pa.

Doctor Abbott was one of my best personal friends and I am indebted to him for a great many things. His advice was always splendid and sincere and I shall never forget his kindness to me at Atlantic City, shortly after I had been elected Dean. At that time, we rode in a wheelchair and he outlined a number of things that I should do if I desired to be a successful Dean. The most important thing, he said, was, to consider every side of the question and then act according to my best judgment and not fear the consequences. This policy I have tried to maintain, and I believe that it is very largely responsible for any success I have made.

W. A. PEARSON, M. D.
Dean, The Hahnemann Medical College and Hospital.
Philadelphia, Pa.

As a modest stockholder in THE ABBOTT LABORATORIES, my relations with Doctor Abbott have always been of the most delightful character. I mourn with you the loss of one of Nature's Noblemen.

L. T. BREMERMAN, M. D.
Downington, Pa.

Your telegram announcing the death of

Doctor Abbott has shocked us. In the passing away of Doctor Abbott, we have lost one of the truest and most loyal friends. Doctor Abbott stood prominent not only for his professional attainment but for his great generous heart and willingness to help others.

There is no one, aside from yourself, I believe, who can more fully realize how loyal and close a friend Doctor Abbott was, than I. He was one of the few men that I have met in business life who had faith in the other man, and who was willing to trust him, very often and much to his own loss. One is thankful for the privilege of being a friend of a man of this type under present conditions.

RICHARD SLEE, M. D.
President, The Slee Laboratories.
Swiftwater, Pa.

I was very much shocked when I opened CLINICAL MEDICINE, several days ago, and saw the first two pages in deep mourning, telling the sad news of the death of my personal friends, Abbott and Butler. Life becomes more serious as it reaches that era of our own where the circle of our friends become smaller and smaller as the days go by.

Those of you who remain have a heritage of loyalty and enthusiasm for the medical profession, left you by two genuine members of the old school. Little did I think, when I sent my saucy message to Abbott, from Boston, that I would not get his reply, nor did I have any premonition, when I sat opposite George Butler, at the banquet of the American Medical Editors Association, and we had our delightful repartee and he made the most eloquent after-dinner speech to which I have ever listened, that that would be the last of him. I sincerely hope that his mantle has fallen on the shoulders of one who understood his enthusiasm and who is willing to continue the department which has been such a stimulant and comfort to thousands of doctor, a name given by him, himself. I refer to the department of "Just Among Friends."

You fellows, as well as those of us who did not have the privilege of close association with Abbott, and the great medical profession at large have lost a real friend and collaborator. This is a time when the English language is poverty stricken to tell just how a fellow feels, when a comrade

in arms drops out at the shot of the enemy.

J. A. STUCKY, M. D.

Lexington, Ky.

For over twenty-five years, it was my good fortune to be associated with Doctor Abbott in the relation of friend and physician. A most prominent trait in Doctor Abbott's character was his capacity for friendship. He had many friends—not mere acquaintances—friends who loved him and whom he loved with an abiding affection. He had the ability to see the best in one—just as one would like to be seen—the petty faults were ignored and were never referred to for the edification of other friends.

Again and again, someone, to whom he had tried to be a friend, proved false and cheated him sorely. Yet, he never lost faith in humanity and never complained. When I boiled with indignation and wanted to revile the wretch, Doctor Abbott uttered no word of condemnation: rather he was inclined to take himself to task as if, perchance, he might also be at fault.

The largeness of his nature and his quick, sensitive mind enabled him to be a real friend to many people, while the average man might have a few cronies.

He was your friend and my friend.

ALBEN YOUNG, M. D.

Chicago, Ill.

Life is but a very short span and is made up of dark and bright spots. The really brightest spots are those made by the true friends that we gain as we pass along.

With the passing of Doctor Abbott, I have lost one of the truest and most loyal friends that I have ever had, and who made one of the brightest spots in my life.

Of intense energy and always busy, still he was ever willing and found the time to talk with or write to his friends and to counsel with them as to their own worries and troubles.

With business interests of his own that required twice as much time and energy as the average business man is capable of accomplishing, still he was ever ready and willing to give liberally of his time, energy and money to the furthering of any worthy cause; and it was all given in such an unassuming manner that many did not realize

what real sacrifices he was making in their behalf.

Having a clear-headed, strong business mind, still he was possessed of a very fully-developed esthetic side; the two together making a combination rarely found.

Eloquent and witty, but always clear and forceful in his utterances; you always had a feeling not only of pleasure but of having been bettered by having heard his remarks.

In his bodily person, the Doctor has passed from our sight; but, what he was to us while he was living will remain with us as one of our most cherished memories as long as we live.

A dear friend has passed to the great beyond; gone but never forgotten.

GEO. C. HALL,

Vice President The Zemmer Company.
Kalamazoo, Mich.

Feeling rather than thought is dominant tonight and, in the presence of this message of death the world seems dark and sad to me. Kind Time, no doubt, is on the way with assurances of comfort; but at this hour, for me the sense of loss abides. I realize only that a great, wholesome, cheerful spirit has gone; that my cherished source of friendly counsel and affectionate interest has somehow failed; that the golden bowl of our friendship is rudely broken at the foundation.

Let me rededicate to the memory of my dearest friend some verses he said he loved and often reread and which, later, I may be able to voice as the sentiment of my heart:

I'll Soon Be Coming Up Your Way

- "T is but a journey, dear
And
We shall meet again, I know,
In that fair land where thou hast gone—
Where flowers and palms and blessings
grow!"
- "T is but a step from here,
And
There, as here, the skies are blue;
What matters it what lies between,
If ships are strong and friends be true?"
- "T is little change, they say,
And
The wide river is not dark—
While His firm hand is at the helm,
Guiding along the tiny bark!"
- "T is wrong to mourn; I laugh
And
Wave my hand to you, my dear;

Death has no terrors for me: ah,
He is the least foe that I fear!
"Then will I wear bright flowers,
And
Smile with the sunshine of the day;
Goodbye, my friend, my lucky friend—
I'll soon be coming up your way!"
E. S. GOODHUE, M. D.
Roosevelt, Molokai, Hawaii.

The American Medical Editors' Association has suffered an irreparable loss in the death of Doctor Abbott—a true friend, a delightful companion and a man who has always stood for all that is best in medical journalism. We shall miss him greatly.

DR. FRANK C. LEWIS,
President, The American Medical Editors' Association.
New York City.

Without any doubt, apart from our good friend, Dr. Joseph MacDonald, Doctor Abbott was the most active and hard-working member of the American Medical Editors' Association, not to speak of his tremendous energy expended in the interests of THE ABBOTT LABORATORIES. I can go back the better part of twenty years, to a time when I took an early morning train from the Auditorium Annex and had a long chat with Doctor Abbott in his private office. I was quite impressed at that time when he told me that he was at his desk every morning at seven o'clock and that he personally assorts all the mail an hour and more before the office staff arrived, continuing to work right along till late at night. I asked him if he did not think he was attempting a little too much, particularly in view of his being a short stout man, with the usual tendency to high blood pressure. He laughed at me and said he loved work and preferred working to taking a holiday.

In the death of our good friend, all of us connected with the American Medical Editors' Association have lost a most valuable member and, as a medical-journal publisher, he will be sorely missed.

W. A. YOUNG, M. D.
Managing Editor, *Canadian Journal of Medicine and Surgery*.
Toronto, Canada.

Though eighteen years have elapsed since the event, I well remember the day when I first met Dr. W. C. Abbott. He had read the first issues of *The Critic and*

Guide, was favorably impressed with what he called the "punch" and the courage of the little magazine, and he wrote to me that he wished to make my acquaintance the first time he got to New York.

The opportunity was not long in presenting itself. One morning, I heard a cheery, hearty voice at the phone: "This is Doctor Abbott, of Chicago. I want you to come down and have lunch with me."

I came down, I found an electric dynamo, full of life and energy, frank, jolly, breezy, brimful of jokes and stories, but capable of passing instantly from the lighter vein to a serious discussion of important matters. His little vestpocket memorandum book would be constantly in and out. No sooner would he recollect something, no sooner would he be struck by a suggestion you made, than out would come the fat little memo book and the idea would be jotted down.

"We spent about three hours together that afternoon, discussing a multitude of subjects relating to medicine and pharmacy; his enthusiasm for definite medication was unbounded, his conviction of the superiority of active-principle therapy over the indefinite, changeable and non-standardized galenicals (standardization came later) was genuine and unshakable and he had the proofs and data with him.

On that afternoon, a friendship was cemented which lasted uninterruptedly to the day of his untimely death; though, during the past year or two, he could not attend to his correspondence as promptly as before. The last time I saw Doctor Abbott, was in New Orleans, at the meeting of the American Medical Association, last year. Although undoubtedly a sick man then, he was as cheery, as optimistic, as enthusiastic as ever.

In this competitive world, Doctor Abbott could hold his own; his idealism was buttressed by a remarkably shrewd business sense; he would not permit anybody to step on his toes and he could and would fight effectively any attempt at unfairness. But, he was fair in his dealings with all men and the "square deal" was his motto.

Doctor Abbott was a man of exceedingly generous impulses and his employees and business associates idolized him—which is sufficient evidence of the fineness of his character.

I trust his friends and business and edi-

torial associates will perpetuate his memory in a manner worthy of the man.

WILLIAM J. ROBINSON, M. D.
Editor, *Critic and Guide*.
New York City.

It was my privilege to meet Doctor Abbott in the very early days of my contact with medical journalism. He had a lot of sympathy for the youngsters in the game and his cooperation was always extended most heartily and without the formality of it being requested.

The sympathy of the entire *Modern Hospital* organization is extended to THE ABBOTT LABORATORIES and to the staff of THE AMERICAN JOURNAL OF CLINICAL MEDICINE because of the great loss which has been suffered through Doctor Abbott's death.

O. F. BALL, M. D.
President, *The Modern Hospital* Publishing Company.
Chicago, Ill.

In taking stock of my many friends who have passed beyond the Great Divide, I know of no greater loss to me personally than the passing of Doctor Abbott.

For twenty-five years, I enjoyed a very close and intimate friendship with Doctor Abbott and have often thought that, if I had had a pace-maker like him, I could have accomplished something in this world.

His cheery manner, when visiting our office, put us all in better spirits, as his good nature radiated enthusiasm; and his cheerful "Hello Mac," whenever he met me, will be sadly missed.

He was a pace-maker, not only in his personal activities but as a manufacturer of pharmaceutical remedies, and his loss will not only be to his family and to his intimate friends but to the great medical profession who have learned the dependability of the products to which his name was attached.

I know, Doctor Abbott's teachings have instilled into his employes and colaborers that high ideal of superiority. While the Head may be gone, the impression he leaves is so deep and permanently grounded that his spirit and memory will continue to enthuse those who are to carry on the great project which he established.

By the death of Doctors Abbott and Butler, I am reminded of Oliver Wendell Holmes' verse:

Fast as the rolling seasons bring
The hour of fate to those we love,
Each pearl that leaves the broken string
Is set in Friendship's crown above.

As narrower grows the earthy chain,
The circle widens in the sky;
These are our treasures that remain
But those are stars that beam on high.
J. MACDONALD, JR., M. D.
Managing Editor, *American Journal of Surgery*.
New York City.

My acquaintance with Doctor Abbott extends over a period of more than ten years. For six years, I was his pastor, a relationship which brought me in close contact with him on many occasions, and I came to have great respect for him.

He was no ordinary man. His achievements are monumental, eloquent expressions of his genius. While he specialized in the science of medicine, he had interests that ran out in other directions. I soon discovered, for instance, that he had a rather wide knowledge of classical literature. Matthew Arnold defined culture as "a knowledge of the best that had been written." If that is true definition of culture, Doctor Abbott had that.

His manhood was a composite of many sturdy qualities. Many times I got a glimpse of his true inwardness and found a kindly, sympathetic and gracious soul. He was charitable and benevolent, befriending those he deemed worthy, and extending aid to those in distress. And, there were no announcements following his gifts; just a quiet outflow of heartfelt generosity. He had a way of not letting his left know what his right hand did.

I am glad, indeed, to have known this strong, commanding personality. His friendship for me I shall cherish all through life.

R. SCOTT HYDE, D. D.
Formerly Pastor of the Ravenswood M. E. Church.
Chicago, Ill.

When Doctor Abbott's family, associates and friends shall confront the Fourth of July in subsequent years, may they remember that, even as the Colonies passed into a broader existence from that day on, so has he now gone on that day into a higher and better land and life; *to be with the Master and Lover of mankind for eternity*.

FRANK B. TRACY.
Chicago, Ill.

From the first time I met Doctor Abbott, I have always admired him for the earnestness and industriousness with which he has conducted his business and for his per-

sonal interest in all those associated with him.

ROGER ADAMS.

Professor of Organic Chemistry, University of Illinois.
Urbana, Ill.

He has been one of the wonders among all the people I have known; he was a remarkable man in many ways,—in the amount of work he did, in the variety of his activities, in the number of friends he had and in the amount of good he did.

ANDREW W. EDSON.

Associate Superintendent, Board of Education.
New York City, N. Y.

Resolution Passed by the Board of Directors of The Abbott Laboratories

THE ABBOTT LABORATORIES has suffered a great loss in the death, on July 4, 1921, of its founder and beloved president, Dr. Wallace C. Abbott. He gave his life that this business might be worthy of the high ideals which he had set for it. His incessant labors in the difficult years of organization, contributed much to the rapid growth and present stability of our institution, which we shall strive to maintain.

Always an advocate in word and deed, of the great principle of the Square Deal, Doctor Abbott was loved and respected by his employes and those with whom he did business. His tremendous energy was softened by a tender regard for those in need, and a thoughtful consideration of the little things which might be done to lighten the burdens of those less weary than himself.

Doctor Abbott was never too busy to stop for a word of cheer and encouragement to his associates. Never grasping, but always generous, he built his business on the Golden Rule, and it has thus been successfully established on a firm foundation.

It is resolved that this statement be spread upon the minutes as a permanent record of our regard for the founder of this business.

Having been a lifelong friend and co-worker with Dr. Abbott, I feel that I may be privileged to say a word with those to whom his death came as a great shock.

It was my great privilege to know and to be associated with him from early boyhood, when we played, worked and schooled together. The sterling qualities and in-

domitable will and determination to succeed that so prominently stood out in the man were equally prominent in him as a boy. Generous to a fault, always thinking how he could help some one in sorrow, trouble, or striving to win a place in the world, many there are that can say his helping hand made the way easy for them.

While he has gone from us, his memory and life will be an inspiration for us to strive to the uttermost to carry on the work he so dearly loved.

H. B. SHATTUCK.

Manager New York Office, THE ABBOTT LABORATORIES.
New York City.

Resolution Passed by the American Pharmaceutical Manufacturers' Association

It is my sad duty to announce the death of our dear and honored friend and associate, Dr. W. C. Abbott, President of THE ABBOTT LABORATORIES, early in the morning of July the 4th. This sad news was not wholly unexpected, since the Doctor had been failing rapidly during the past year. The Wonalancet meeting was the first annual association meeting he had missed.

No one in our industry was more beloved than Doctor Abbott, no one more respected. One of the founders of this association, he was ever active and interested in its welfare. A truly great man! His heart was big enough sincerely to love all with whom he was associated. His generosity and kindness were without limit. His sterling character and pure honesty were indelibly written upon his face. There shone a soul which we know has gone to its true reward in the other world.

Possessed of extraordinary native ability, approaching genius in its brilliancy, he created a great business, unique in character, highly successful in result, which will remain as a lasting monument to his business acumen. That wonderful brain was driven by a body filled with tremendous energy and aggressiveness. Indeed, the spirit was stronger than its body, magnificent as that was. The body was driven on to its exhaustion by a power that could not be satisfied except by maximum physical response.

In many respects Doctor Abbott was similar to Theodore Roosevelt. They were each the personification of dynamic energy, of the highest and most sensitive honor,

and of unimpeachable honesty and character. Fearlessly and frankly they spoke the truth, without qualification, at all times. They lived for a real purpose, were actuated by the loftiest ideals, were men of vision, and they scorned the unworthy things of life. They lived true to themselves, and by the example of their beautiful lives inspired all with whom they came into contact to higher and better thoughts and deeds.

Doctor Abbott's intellectual powers were most unusual. Interested in poetry, literature and the arts, his mind seized upon and grasped their beauties. His discourses were always scholarly, punctuated and interlarded with quotations from the gems of English literature. He was a voracious reader and his intellect hungered for food always. He possessed an unquenchable thirst for knowledge and was a learned man in the true sense of those words. It was a privilege to converse with him. His interest was keen in everything; and his counsel sound and sincere.

A great and extraordinary man, in all respects, unique in personality, outstanding in mental and bodily vigor! A man of action, of accomplishment, never content to follow, always seeking to lead and do. We could not fully appreciate him unless he was with us; we can never forget him now that he has gone. He has left the impress of his character and ability in his business, in the community in which he lived, in this association, which will always remain to recall him. His life is our heritage—we all have profited by it. Surely, if it is our great objective in life to serve and make humanity the better for our living, then Doctor Abbott has lived to a great and successful purpose.

We like to think of him most for his human qualities, for his humanity. Great business man as he was, great as was his intellect, he was first and above all a man—one of those rare jewels of life, a real man with a true soul and great heart. His kindly disposition and friendship knew only the limits of his ability. He was always willing to help, at a great sacrifice to himself. Nothing pleased him more than to make someone happy, to render a personal service. And such service was daily performed, without stint. His great and generous heart was easily responsive to the slightest suggestion. He was loved by all. We can not believe that he had an enemy;

that there could be anyone who could rightly entertain other than affection and esteem for him. He could not hurt needlessly; he could not be unjust intentionally. He was too big to stoop to the low; he was too good to see the bad.

We all loved him. To say that we mourn him and shall miss him, would be, to express inadequately our grief. We glory in his life; we cherish in our inmost hearts its example and inspiration. To know that such a man has lived; to have had the privilege of his acquaintance—to have counted him as one of our friends;—that is a knowledge and possession that will make our own lives better and happier. Life is so short! And, what a wonderful service to have crowded into those few short years. He lived intensely; he died in harness, as he wished. He gave all that was in him, as he lived. We have his good works; we have his dear memory. We can honor his memory by endeavoring always to perpetuate his ideals in deeds. I can not feel that he has gone. He is sleeping. His life remains with us. His soul has gone to the fullest reward which our Master gives to the good and pure.

I am forwarding the following resolution to Mrs. Abbott and to THE ABBOTT LABORATORIES, together with this statement, to evidence our great and profound grief and to offer our condolences:

Resolved: That the American Pharmaceutical Manufacturers' Association does hereby record this inadequate expression of its profound grief in the death of Dr. Wallace C. Abbott, President of The Abbott Laboratories and Past President of this Association, a great and true man, and expresses to his family and association its deepest sympathy in this great loss and bereavement.

C. H. SEARLE, M. D.
Chicago, Ill.
President.

Some men we simply admire, without affection. Others we love and admire. They are driven onward through life by their heart, rather than by their intellect. Where the heart leads, the intellect follows. Where the heart refuses to go, the intellect can not approach. Their outstanding characteristic and primary quality is, their great heart. Their lives are inspired and guided by the purest and loftiest sentiments. They have the heart of a child, easily touched and immediately responsive to the slightest call upon their sympathy and generosity. They live to serve others, and by such service are great. As the rose

unfolds its petals and releases its divine fragrance, upon maturity, so their character, in the passage of life, unfolds its beauty, and releases its inexhaustible humanity.

Such a man was Dr. Abbott. Extraordinary as were his native and acquired abilities, remarkable as were his material accomplishments, he was above all else, to me, a great heart, a real man with a silk-lined character, great in his good deeds, and yet withal so simple and unaffected. Upon the many thorny hedges of life through which he passed will be found clinging the fleece of his kindness. Much as he loved the great business which he created, nothing gave him more real pleasure and greater satisfaction than to serve, to help others, to make others happier. His life was enriched by a multitude of good deeds, and the world is happier and enriched by his life. As he lived in the light of his great heart, so he lives on in the hearts of the many who love him, who will cherish his memory as an inspiration in their own lives.

CHARLES WESLEY DUNN,
Counsel, American Pharmaceutical Manufacturers'
Association.
New York City.

I became acquainted with Doctor Abbott many years ago and acquired a high regard for his upright, manly character, the independence with which he defended what he believed to be right, and the fearlessness with which he attacked the evils in the professions of medicine and pharmacy.

In the National Drug Trade Conference, of which he was one of the organizers and for long an active participant, we learned to appreciate the vigor and soundness of his counsels upon matters of general professional policy. His death will be a loss to the Conference and to many other professional interests, as well as to the firm which he established and helped to bring to such a high state of efficiency.

"To live in hearts we leave behind
Is not to die."

Of Doctor Abbott, we might say, that his memory will continue as a living inspiration to those of us who remain.

J. H. BEAL,
Director of Pharmaceutical Research, University
of Illinois.
Urbana, Ill.

It was my privilege to enjoy a personal acquaintance and contact with Doctor Ab-

bott for a great many years, and I am sure that any one who had this personal contact could not help but have the same high regard for him that I did. His pleasing personality had a wholesome influence always with those with whom he came in contact.

HARRY SKILLMAN,
Business Manager, *The Bulletin of Pharmacy*.
Detroit, Michigan.

Doctor Abbott was indeed held in high esteem by all who knew him personally and by those who had business dealings with him. They will feel a personal loss in his death.

C. H. WATERBURY,
Assistant Secretary,
The National Wholesale Druggists' Association.
New York City.

Doctor Abbott was my personal friend. The old saw, "square as a die," fittingly expresses my opinion of one of his business qualities. But, he was not only "square," he was sympathetic to an extreme; helpful, generous, just.

My acquaintance with Doctor Abbott covers a period of more than a quarter of a century. During this period, THE ABBOTT LABORATORIES grew to its present large proportions while the Maltbie Chemical Company grew from almost nothing to its present substantial size, though, of course, small in comparison. Is it any wonder that I, at this time, give more thought to the past than to the future?

In all these years, I found Doctor Abbott a helpful friend, ready at all times to lend a hand whenever and wherever he could. His advice was frequently sought and, as frequently, generously and honestly given.

I have not expressed only my own personal feelings. I know there are many others, probably hundreds of others, whom Doctor Abbott befriended in many ways and who feel as I do.

In the death of Doctor Abbott, the drug trade as a whole loses one of its ablest, noblest and best men. May his memory be forever kept green. It certainly will in the office of the Maltbie Chemical Company.

B. L. MALTBIE,
President, The Maltbie Chemical Company.
Newark, N. J.

I can hardly hope to make you fully appreciate the great regard and deep affec-

tion I had for the Doctor, whom I first met upon the occasion of the organization of the American Drug Manufacturers' Association in 1912. There was something in his makeup that appealed to me. I like outspoken men of noble sympathies.

Doctor Abbott's friendship was not measured by the success, the standing or the power of its object. Right has enthusiastic supporters by the hundreds when it is strong and does not need them; but, when Right is not in the ascendancy, when its cause is apparently a lost one, then those who are its friends are true friends indeed.

I think I knew the real Dr. Wallace C. Abbott. He was a man of strong convictions; yet, amenable to reason and, if convinced, prompt and gracious to yield. His motives were pure. He possessed the courage of his convictions combined with proper tolerance for the views of others. He spent his time and money freely in the cause of medico-pharmaceutical freedom and progress. He was always present at important gatherings even when considerations of health required that a physician accompany him.

The real Dr. Wallace C. Abbott is not dead but lives in the image of his Maker, to welcome his kindred and friends as, one by one, they pass over to the other shore where Time is lost in Eternity.

The spirit man we may not keep
Fore'er within its shell of clay;
Why, then, lament and sadly weep
To lay the empty shell away?

Grief has its day; Pain has its hour;
But Peace and Joy shall never wane;
For, happy in God's love and power
Shall spirit man forever reign.

Then question not the acts of God
In this short vale of woe and tears.
A moment of Eternity
Is longer than a million years.

Nor judge ye His unfinished plan;
But in His gracious love confide;
Eternal is His likeness, man—
Eternal spirit—in this truth abide.

CHARLES M. WOODRUFF,
Sec'y-Treas., National Drug Trade Conference.
Detroit, Mich.

During his long and useful life, Doctor Abbott contributed greatly to the advancement of the profession—not only in the practice of his profession, but equally in

the high, ethical plane upon which he conducted the manufacturing business of which he was the head for so many years.

We feel that his passing is a grievous loss to the pharmaceutical world in general, and we feel it very much.

J. D. GILLIS,
General Manager, John T. Milliken & Company,
St. Louis, Mo.

It was my privilege to enjoy a personal acquaintance with Doctor Abbott. My admiration for his strength of character and forceful personality grew with each opportunity for personal contact.

It has always seemed to us that the friendship and the mutual understanding and esteem which existed between Mr. Stofer and Doctor Abbott reached into the ranks of each organization, to the extent that we of "Norwich" were always interested in seeing THE ABBOTT LABORATORIES forge ahead and grow big and powerful.

All of us here at Norwich, therefore, feel deeply sympathetic for you in your bereavement in this time of sorrow. We know what your loss means to you because we are still at the height of our grief in our own similar experience.

W. G. PECKHAM,
Vice-President, The Norwich Pharmacal Co.
Norwich, N. Y.

Anyone who knew the doctor, was certainly a better man for the knowing. His loss will be keenly felt by those of us who knew him, for many years to come.

TURNER F. CURRENS,
Vice-President, The Norwich Pharmacal Company.
New York City.

In common with all who knew Doctor Abbott, I have always had a high admiration for his great ability; but, further than this has been the feeling of a personal friendship. In the days that are gone by, I always looked forward with pleasure to meeting him at the gatherings of the associations and conferences where he and Mr. Stofer had so much in common and where we were thrown together more or less intimately. In our personal relations, I learned to appreciate the many lovable human qualities which the Doctor possessed and it was also a pleasure to watch his very clever manner of handling any subject under debate at these conferences.

To me it was a very marked pleasure to watch him marshal his thoughts and clothe

them in the exact and appropriate language which he always used. I have frequently heard him spoken of as the "Human Dynamo" and it is cause for profound regret that one with so much energy and such a love for accomplishing things, should pass away. His death is a great public loss in the world in which he lived and, to me, his memory will live in the recollections of the many personal contacts which it was my privilege to enjoy.

J. FRED. WINDOLPH,
Secretary, The Norwich Pharmacal Company,
Norwich, N. Y.

It has been my pleasure to know Doctor Abbott for more than twenty years, and all my associations with him have been of the most friendly nature.

We have not only respected him for his excellent business judgment, but have appreciated greatly his advice and counsel in the chemical world.

I know that those of you who were personally associated with him in business will feel his loss keenly. I wish I were able at this time to write something which would make your grief less severe, but I realize that mere words cannot fill the vacancy that is in your hearts.

GEORGE D. KENYON,
Western Sales Manager, The Norwich Pharmacal
Company,
Chicago, Ill.

Doctor Abbott's loss will be felt by manufacturing pharmacists generally. He was a man of unusual attainments and was always a most welcome attendant at our various trade meetings. I feel that in his passing I have lost a true friend.

CHARLES J. LYNN,
General Manager, Eli Lilly and Company,
Indianapolis, Ind.

We sincerely regret to learn of the death of Doctor Abbott and realize that your business and industry at large have lost a great deal by his removal. We appreciate his many sterling qualities and extend to his family and business associates our sincere sympathy.

MILTON CAMPBELL, President,
and
H. H. WHYTE, Secretary,
H. K. Mulford Company.
Philadelphia, Pa.

It was the writer's privilege to have met Doctor Abbott and he realizes how se-

verely you must feel the void he leaves behind him. We know that he will be missed by you as a wonderful and remarkably successful executive and as an associate who was a true friend, beloved by all who came in contact with him.

AUGUST KOCHS,
President, Victor Chemical Works,
Chicago, Ill.

Very painful is your telegram announcing the death of our friend, Dr. W. C. Abbott. We extend our sympathies to his family and yourselves. If in any way we can be of service, call on us freely.

LLOYD BROTHERS,
Cincinnati, Ohio.

We are shocked by the unexpected news of Doctor Abbott's death and, in behalf of Mr. Mallinckrodt and his associates here, we extend to you and the members of Doctor Abbott's family our sincere sympathy in their great loss and bereavement.

MALLINCKRODT CHEMICAL WORKS,
St. Louis, Mo.

I regarded the doctor as one of the strongest men in our line of the work and a man who has done a tremendous amount for the medical profession and for a better understanding between physicians and pharmaceutical chemists. The medical profession certainly will be the poorer by the Doctor's passing. It is a pleasure to know that he has left the business in such good hands and that he had the foresight to make business arrangements such as would enable the members of your splendid staff to keep together and to have a financial as well as a sentimental interest in the business.

H. S. BAKETEL, M. D.,
Medical Director, H. A. Metz Laboratories, Inc.
New York City, N. Y.

No more genial-hearted man has come into our acquaintance than Doctor Abbott. He was good, wholesome and whole-hearted clear through, and was a clean-cut business man who was loved by all who knew him. He has done good work, fought a good fight and earned his rest.

W. H. FRENCH,
President, Barnhart Brothers & Spindler,
Chicago, Ills.

I have known Doctor Abbott for nearly

eighteen years, and in all that time our relations were most pleasant and friendly. I never talked with him but what I felt encouraged and strengthened by his remarks. I shall miss him.

FRANCIS J. STOCKES,
F. J. Stokes Machine Company.
Philadelphia, Penna.

As long as I live I cannot forget this great and good man. He has lived a life of usefulness and service; and everyone who has had an opportunity to rub elbows with him has been benefited.

H. N. TOLLES,
Vice-President, The Sheldon School.
Chicago, Ills.

I was very sorry to learn of the death of Doctor Abbott. I have always respected him. I have admired his ability, his tireless energy and his willingness to fight at any time for what he thought was right.

As I came to know him better, I liked him. It was always a pleasure to join his company and talk with him.

On my visits with the doctor, at his laboratories, I saw him from a different angle. Here I found him full of kindly sympathy for all his associates and workers. He seemed to love them all and, in talking with many of these associates and workers, I found that Doctor Abbott was not only respected but loved by his people. Such a measure of loyalty and love, as he inspired in THE ABBOTT LABORATORIES organization, showed that he was a real man and a great man.

I, too, have grown to love him. He has helped me in many ways. His going means a real loss to me.

RALPH R. PATCH,
The E. L. Patch Company.
Boston, Mass.

Humanity has lost a very great friend. Doctor Abbott's life conveys a wonderful

lesson and we can best show our admiration for him by trying to follow his footsteps.

W. E. A. WYMAN, M. D. V.
Food Inspector, City of St. Petersburg.
Saint Petersburg, Fla.

THE ABBOTT LABORATORIES ELECT NEW CHIEF

We are informed that Dr. Alfred S. Burdick has been elected president of The Abbott Laboratories, in place of Dr. Wallace Calvin Abbott, the founder and life president of that prominent firm of manufacturing chemists, whose death we mourn in common with so many others.

Doctor Burdick has been associated with The Abbott Laboratories for seventeen years and was, during Doctor Abbott's illness, his efficient representative. Under his guidance, the progressive and sterling policies of The Abbott Laboratories are certain of being maintained and of being developed further.

Dr. Alfred S. Burdick first became associated with Doctor Abbott as editor of THE AMERICAN JOURNAL OF CLINICAL MEDICINE, in 1904. Later he was made Vice President and Assistant General Manager of The Abbott Laboratories in which positions he ably supported the President, Dr. Abbott himself, for whom the constantly increasing amount of work had become too great.

During the period of Doctor Abbott's illness, Doctor Burdick served as the active head of The Abbott Laboratories. His enthusiastic promotion of products of whose excellency he has convinced himself, his keen clinical sense and his appreciation of the needs of the general practitioner, in addition to his many other qualities, have made Doctor Burdick an unusually suitable man for the position to which he has been elected.

While extending our congratulations and cordial good wishes to the new head of The Abbott Laboratories, we also congratulate the latter for having available so capable a successor to Doctor Abbott.



Leading Articles

A Consideration of the Diet of Infants in Relation to the Physical and Mental Status of the Next Generation

By J. F. McCLENDON, Ph. D., Minneapolis, Minnesota

Associate Professor of Physiological Chemistry, University of Minnesota Medical School

THE large numbers of rickety and under-nourished children, now in Vienna and other cities, demonstrate beyond a doubt that growth may be retarded in rickets and that deficient diet has a marked effect on the physical development of children. The Selective Draft Boards showed a large percentage of physical defects in the youth of this country that have at least partly been caused by defective nutrition in infancy. Can mental inadequacy be ascribed to similar causes?

This paper defends the thesis that mentality is a function of the brain and the growth of the brain is determined, not merely by heredity, but also by the presence of the necessary chemical substances for the synthesis of brain tissue.

The problem of the heredity factor is very complicated. If we go back ten generations, we find 2,000 ancestors whose mental traits must be analyzed and of whom no adequate records have been kept. Owing to the continuous juggling of hereditary factors in the human race, we will assume that, by taking a large number of unselected individuals, all hereditary factors will be present in the group, although such a method may lead to error.

We will consider, therefore, the brain of the embryo as a chemical organism of standard composition. Growth of the brain will be determined by the presence of the raw materials from which new brain tissue may be synthesized, and we will assume that it is not influenced by deleterious substances. I have studied the effect of toxic

substances on the growth of the brain. These cause such profound changes as to lead to marked monstrosities in which the question of mentality does not arise, as mentality is absent.

Limiting factors for growth may be chemical, thermal, or mechanical. The growth of aquatic plants is determined by the concentration of that chemical substance which is mostly deficient in quantity, which may be nitric or phosphoric acid in the case of marine plants or carbon dioxide in the case of fresh-water plants. (For a recent consideration of this subject, see McClendon, 1918). This is called the Law of Minimum and probably applies to the growth of the brain.

The evidence presented in support of this idea will be divided into two parts; first, that from the field of chemistry and nutrition and second, that from the field of physiology, education and psychology.

Chemistry and Nutrition

Chemical substances necessary for synthesis of brain tissue are derived from two sources, first from the food, drink and breath, and second from the synthetic activities of other organs of the body. We know that water, inorganic salts, oxygen, a long list of amino acids, and at least three vitamines must be supplied from the outside. Glucose is regularly so supplied and so is galactose during the nursing period. Since galactose is synthesized in the mammary gland, it falls in the class of substances formed in the body; but it is doubtful that the body of the infant can syn-

thesize it in quantities necessary for use in the building up of galactosides in the rapidly growing brain.

Of the substances synthesized in the body, we have the purines and pyrimidines, guanin, adenin, thymin, cytosin, and so forth, some of the amino acids, at least glycine; glycerine, fatty acids, some carbohydrates, also thyroxin, adrenalin, and the secretion of the adrenal cortex, thymus, hypophysis, pineal gland, interstitial cells of the sex glands, and cells of the pancreas.

That thyroxin is necessary for the growth of the brain, is shown by a study of the condition of the cretinism in which thyroxin is deficient. The brain does not grow at a normal rate and the intelligence is low. In order that the thyroid be able to synthesize thyroxin, it is necessary that iodine be supplied the body. E. B. Forbes was unable to detect iodine in half the animal-feeds examined, and Bohm found even less. Various parts of the country seem to be deficient in iodine, causing goiterous sheep, hairless pigs and goiterous humans. Dr. Marine has been able to improve the mentality of the school children of Cleveland and Akron, Ohio, by simply feeding them sodium iodide.

Tredgold ("Mental Deficiency," p. 291) mentions Nutritional Amentia but does not indicate the deficiency.

In animal experiments, we find it necessary to supply iodine in the diet. I have found that sea water contains enough iodide for this purpose. If seawater is evaporated in an iron kettle and baked in an ordinary cook stove oven, a dry salt is obtained that does not have the bitter taste of seawater but contains every metallic element and all of the halogens. Fifty parts per million of dry salt is iodine (iodide). When this salt is used as the salt ration for white rats, normal growth is obtained.

The growth of the brain may be stopped by absence from the diet of tryptophan or some other amino acid, one of a long list of mineral salts, or of the vitamines A or B. Growth is retarded in rickets, which has been shown to be a deficiency disease. The exact nature of the deficiency has not been determined but the vitamine A seems to be concerned here.

In regard to the very unstable compounds in the diet, they may be present in fresh food and decompose before the food is absorbed in the intestine. The anti-scorbutic vitamine (vitamine C) is very

sensitive to alkalis. I found the intestines of both young and mature carnivora, including man, to be acid. In the herbivora, however, the lower end of the ileum is alkaline. In the guinea pig, I found that feeding lactose changed the intestine from alkaline to acid and Dr. Shillington, in my laboratory, found that a less amount of anti-scorbutic vitamine sufficed if lactose were fed simultaneously.

Since deficiency of one element in the diet causes cessation of brain growth, deficiency in all must necessarily stop growth. Growth may be stopped for a while, and then, under some circumstances, the loss may be regained by re-feeding. Drs. C. M. Jackson and C. A. Stewart showed, however, that, if the growth of newly-weaned rats is stopped about 3 months by deficient diet, the brain is permanently stunted and no amount of re-feeding causes recovery.

Undernourishment in Orphanage Inmates

The question arises whether enough undernourishment occurs in this country to make it the object of discussion. The standard growth curves of infants are made from statistics which may possibly include undernourished as well as normal infants. Even taking the average as normal, there are large numbers of cases of undernourishment. For this purpose, I have studied the infants in an orphanage in the Twin Cities. Virtually without exception, all of them were underweight. This condition has been considered as a characteristic of *institution-babies* and is said by some not to be due to undernourishment. In order to test this question, I studied the diet of infants in general. Mothers' milk is the diet that enables the majority of infants to survive. Mothers' milk is markedly deficient in iron and, if a child is nourished exclusively on it for three years, marked anemia results. This is also true of any kind of milk. The orphans were receiving pasteurized milk, degerminated cereal, sugar, prunes, and occasionally a little canned tomato or leafy vegetable or carrots. Without changing these ingredients, I merely added about 2 teaspoonsful of powdered spinach salted with sea salt and 1/12 ounce of dehydrated orange juice to the diet and, thereby, doubled or trebled the growth rate. The pulverizing increased digestibility. These additions contained a host of substances, especially, large quantities of iron, calcium phosphate and all three classes of vitamines, and traces of iodine.

10 babies average gain per week on regular diet.....	2.3 oz.
10 babies average gain per week with spinach.....	3.2 oz.
With spinach plus $\frac{1}{8}$ oz. dried orange juice ($= \frac{1}{2}$ oz. fresh).....	5.7 oz.
6 babies average gain per week on regular diet.....	2.2 oz.
6 babies average gain per week plus spinach.....	4.4 oz.
With spinach, plus $1\frac{1}{2}$ oz. fresh orange juice ($= 1/5$ oz. dried).....	11.2 oz.
8 babies average gain per week on regular diet.....	2.4 oz.
8 babies average gain per week plus spinach.....	10.9 oz.
<i>Arthur Beck.</i> 2 mos. 20 days. 9 lbs. 1 oz. (normal wt., 12 lbs.) before 0. Plus spinach, 0.5. Spinach plus dried orange, 3.5.	
<i>George Lee.</i> 10 mos. 18 lbs. 11 oz. (wt. normal at end of test). Before, 8. Plus spinach and fresh orange, 23.	
<i>Leslie Leo.</i> 11 mo. 18 lbs. 1 oz. (normal 19 lbs.). Before, 2.5, no spinach. 1st week, 2.5, spinach. 2nd week, 2.5, spinach. 3rd week, 7.0, spinach. 4th week, 12.5, spinach and fresh orange juice.	

Spinach Only

Howard Adams. 2 yrs. 3 mos. 26 lbs. 7 oz. (normal 27 lbs.). Before, 0.05. 1st week, 1.0. 2nd week, 15.5.

Angeline Jennings. 2 yrs. 8 mos. 31 lbs. (Wt. normal at end of test.) Before, 0. 1st week, 0. 2nd week, 16.

Marjorie Callahan. 1 yr. $4\frac{1}{2}$ mos. $16\frac{1}{2}$ lbs. (Normal, 22 lbs.) Before, 4.5. 1st week, 8. 2nd week, 7.

Nearly half showed less gain 1st week on spinach diet, showing that spinach had no effect in one week.

Dehydrated Orange Juice Only

Betty Jones. Before, lost 6.5 oz. a week and, after, gained 5 oz. first week.

* * * *

It might be mentioned that, after the brain has completed its growth, deficiency in some of the substances considered in the foregoing interferes with its function. Thus, insanity may be the result of pellagra, which seems to be due to a deficiency of tryptophan. Melancholia and paralysis may occur due to deficiency in vitamines. Mental inadequacy may be the result of deficiency of the glands of internal secretion, including the sex glands. The adrenals and sex glands are affected in vitamine deficiency, and in deficiency a total food. The sexual and maternal instincts, on which the continuity of the race depends, are impaired by undernutrition or faulty nutrition. (Undernourished rats eat their young.)

It is quite difficult to persuade some persons that undernutrition exists in this country. I think that one evidence of undernutrition is found in our bad teeth. Pickernill and others have shown that savage races have good teeth, whereas 95 percent of civilized persons have bad teeth. Bad teeth seems to be a racial characteristic but, how can we blame them on heredity? The teeth of the natives of New Zealand became as bad as those of their civilized conquerors, as soon as they went to school. Dental ca-

ries has not been proved to be due to specific infection.

There remains the nutritional factor. American Indians had good teeth. *What was their diet?* I have compiled a list of about 500 species of American plants from which they received nourishment. (McClendon, 1921.) Besides those, they ate practically all available animals. Some Japanese and most savages nursed their infants for long periods. Savages killed a certain proportion of their infants and may have starved some. Perhaps they found that all those that were not breast-fed for a long time died. The Fijians had perhaps the best organization. The mother was removed from the father for three years, during which time she nursed her infant and, in addition, gave it what other food there was available.

In a joint study we (Robb, Medes, McClendon, Graham and Murphy, 1921) have shown that lack of the antiscorbutic vitamine causes the bones to dissolve and pass out in the excreta and the dental pulp to be replaced by osteodentine (in the guinea pig).

Physiology, Education and Psychology

It is a fact that a large-sized brain is necessary for the highest intelligence and, hence, high intelligence is possible only in mammals. Such a brain can not be developed without a good start before birth. The relative size of the brain of the fetus is enormous. The body of the fetus is relieved of the necessity of digestion, locomotion and heat regulation and the chief function of the heart is, to supply blood to the brain. The heart and cerebral blood vessels are of relatively enormous size. It has been stated that this is due to the larger relative surface area affected in heat dissipation; but, before birth, the fetus is in a thermostat and therefore heat dissipation

is at a minimum. In order to nourish the fetus, the body of the mother is taxed without any reference to its ability to pay. Such a drain is made on the blood of the mother that cancer will not grow during pregnancy. The head of the fetus grows so large that it can just pass through the pelvic ring and make birth possible. In the horse, with lower intelligence, conditions are not so strained. The small size of the brain allows the fetus to stay in the uterus until it corresponds in development to a two year old human infant. The colt is born easily and can run about and procure food that makes up the deficiency in its mother's milk.

In humans, birth is a crisis. The pigmy body must take on the function of heat regulation, breathing, and hydrolysis of food, and supply the enormous brain with the material for further synthetic growth.

To educate means, *to bring up*, as used in reference to children. A good deal of the energy of educators is consumed in grading the products of education. The Psychologist, Max Meyer, told me thirteen years ago that, at every examination, 3 percent of the students must utterly fail. Psychologists nowadays grade intelligence according to mental age from 0 to 19 years, on the assumption that normal intelligence reaches its full development in 19 years after birth. Does the failure of all persons to attain a mental age of 19 years indicate undernourishment of the brain? Even though parts of the body were well nourished, an inadequacy in the blood flow to the brain might prevent it from receiving proper nourishment. Failure of brain circulation leads to unconsciousness, and arteriosclerosis of cerebral vessels is said to be a cause of dementia.

Does mental exercise increase the blood flow of the brain? We know that physical

exercise causes increased blood flow to the muscles and may promote their growth. August Krogh has observed, in the transparent muscle of a frog's tongue, that, when at rest, some of the blood capillaries stagnate, to start again when the muscle contracts. I have not yet, however, found records to show that mental exercises, increase the growth of the brain. Professor W. S. Foster tells me of a case, studied by his wife, of a boy who had been locked up in the house most of his life by his insane mother. At the age of 15, he was rescued and examined and his intelligence found to be normal.

Professor R. E. Scammon (cited from Woodrow) tells us that the brain completes 90% of its growth in 5 years after birth, and I gather from Professor Herbert Woodrow's book that a child must be educated before school age in order to improve its intelligence.

Professor Woodrow and others have found a distinct, positive correlation between mental age and physical age and, since Jackson and Stewart have shown that physical development can be rendered to a certain extent impossible by early undernutrition, the next plausible step that greets our imagination is, that mental development may be permanently stunted by early undernutrition. The crooked legs and bodies and child-like mentality, characterizing the satyrs of the Greeks, have been attributed to the effects of undernourishment and specifically the effects of severe rickets. Rickets may produce legs more crooked and bodies more stunted than those attributed to satyres. Often, mental impairment goes with rachitic deformities but, there are always some who can attribute the low mentality to some complication less tangible than lack of food.

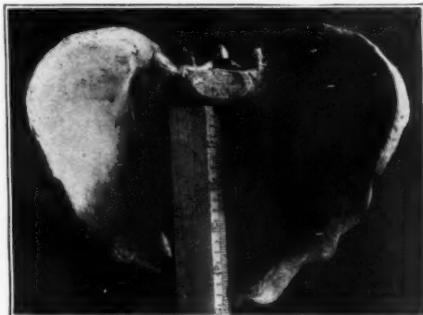


Roentgen Pelvimetry

By DR. EDWARD E. BROSTROM, Los Angeles, California

IN this article is described a method presenting an instrument of precision for procuring correct internal measurements of the female pelvis. Positive information regarding any or all of the pelvic axes is available with this procedure and correct results are dependent only on good technic. There need be no question regarding the maternal structure diameters, and use of the Roentgen pelvimeter will eliminate the uncertain element of borderline contraction cases presenting no external hint of abnormality.

With exact information as to pelvic axes in our possession, the establishment of an intelligent diagnosis and prognosis is a comparatively simple matter, given the average size fetal head. Intense satisfaction is experienced in possessing exact brim, ischial spine, tuberosity and outlet measurements; and this the pelvimeter accomplishes. A description of the instrument and technic follows with a series of



Photograph No. 1.

photographs done by the F. V. Adams X-ray Laboratory of Los Angeles.

Involved Physics

The method comprises:

The x-ray as a source of light and penetration.

A symmetrical negative image is provided by localizing at a common point equidistant from known bony landmarks; namely, anterior spines, symphysis and promontory, sacrovertebral angle, etc.

A symmetrical image is provided by a de-

vice known as the "pelvic plane indicator" which allows for adjustment of the plate to a parallel plane with the desired diameter measurement.

A symmetrical image is provided by the use of a "ray angle" determinator that the angle of the central ray may assume a right angle of incidence with both axes of measurement desired and plate plane.

A device more or less opaque to the x-ray acting as a coefficient when placed on the same plane as the required measurement.

A method for computing plate measurements.

An instrument allowing for the desired technic and application of the necessary physics.

Photograph No. 1

Photograph No. 1 illustrates the application of applied principles in ordinary photography. The x-ray observes the laws of ordinary light as to rectilinear propagation and it is only necessary to adapt the requirements to the x-ray and our results will be the same.

To those not thoroughly acquainted with x-ray physics, simplification results in considering that we are dealing with a cone of light and a circular pelvic brim, also that any object in contact with this circular pelvis and on the same plane enlarges in exactly the same ratio as the pelvic brim itself. In ascertaining the obstetric conjugate, it is true that the rays do slant a trifle more at the external pelvic brim than the top internal margin; however, it would not be possible to compute the amount with any ordinary instrument of precision.

Applied Principles

The height of an object may be determined by a comparison of its shadow with that of a known body.

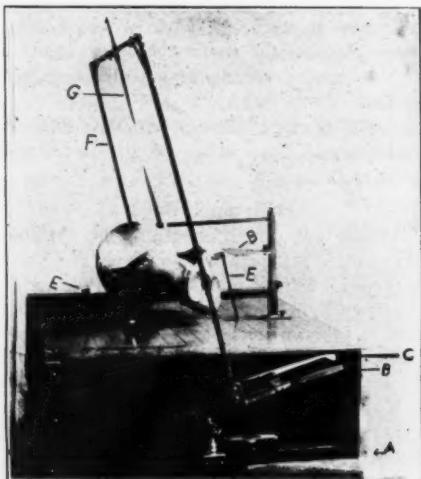
A familiar example of the above is the determining of the height of a mountain by comparing its shadow with that of some object such as a staff of known stature. A simple problem in proportion suffices.

Photograph No. 1 displays a ruler on the same axis as the true conjugate and

acts as a coefficient. A glance at the ruler serves to ascertain the dimension of the conjugate, oblique or transverse diameters.

Photograph No. 2

- A—Cassette Case.
- B—Cassette Rack (is adjustable).
- C—Cassette, plates, screens, etc.
- D—Modulus or coefficient of enlargement.
- E—Pelvic Plane Indicator.
- F—Ray Angle Determinator.
- G—Ray Localizer.
- H—Swivel for adjusting the Cassette Rack to the desired position.



Photograph No. 2.

Note: Instead of the ray angle determinator, a horizon may be secured to the cassette case indicating a certain degree of inclination of the cassette rack, and the x-ray localizer adjusted to the same angle by means of a second horizon on the tube stand.

Photograph No. 3 (see page 527).

Photograph No. 3 further illustrates the application of the principles to the x-ray. The modulus acts as does the ruler in Photograph No. 1 and is placed anterior to and in contact with the external pubic region in the midline, $1/2$ inch below the upper margin of the pubic bone, with a brim picture. The modulus is located on the same level as the ischial spine tips if their distance is required; tuberosity internal width being desired, it is placed on a level

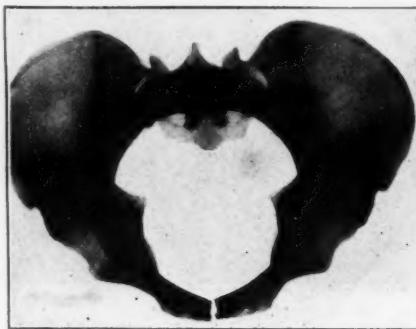
with the widest flare of these prominences. The sacropubic diameter is obtained by placing the modulus at the vulva with the patient in the lateral position.

The cassette case marked A allows for seating of the individual and adjustment to a desired position of the cassette by means of H and the cassette rack is placed on a parallel plane with the axis of the brim as determined by the pelvic plane finder marked E. All that remains is, to determine the angle at which the ray must strike both plate and brim with F, localizing the central ray to equidistant position as to spines, promontory and pubes with G., usually $2\frac{1}{2}$ inches in the midline back from the external symphysis. The tube is now adjusted to the same angle of incidence and localization when F is removed and the exposure made.

The technic of spines, tuberosities and sacropubic diameters is the same as in the foregoing, adapting conditions so as to meet the varied attitudes necessary for the patient to assume in order to obtain proper measuring points.

Photograph No. 4

Print resulting from the preceding photograph of the bony pelvis brim picture.

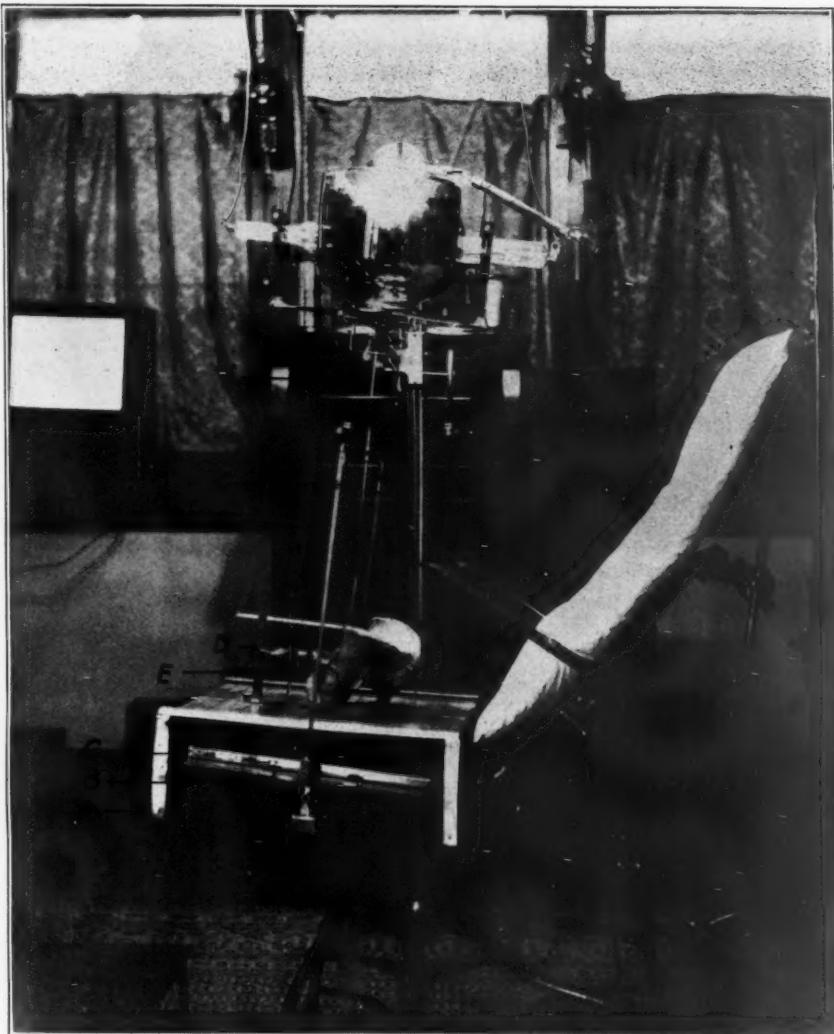


Photograph No. 4

The modulus seen at the base and right side is the basis for computing the conjugate, oblique and transverse diameters of the brim.

Photo measurements	Ratio	Actual measurements
Obst. Conj. 118 mm.	28	10.69 cm.
Transverse 120 mm.		10.87 cm.
R. Oblique 120 mm.		10.87 cm.
L. Oblique 120 mm.		10.87 cm.

Note: Pelvis is a male one, as indicated by the measurements.



Photograph No. 3. (See page 526.)

Photograph No. 5 (see page 528).

Patient in position for brim picture. The steps necessary are as follows:

Patient is seated on cassette case in the modified Walcher position. Plane indicator E is so adjusted that the respective tips are at the sacrolumbar articulation and $\frac{1}{2}$ inch below the upper margin of the symphysis, midline. The plane established is the axis the plate must be parallel with and is accomplished by adjusting swivel H connected to the plate rack so that Plate Rack B is parallel and fixed in this rela-

tion. The cassette is now placed on the rack and the pelvic plane indicator removed.

The anterior superior spines should be equidistant from the top of the cassette case or leveled with the spirit level, and modulus D placed in midline, $\frac{1}{2}$ inch below the upper margin of the pubic brim, with precaution against tipping at either extremity. It should lie perfectly level.

Ray indicator F is now adjusted, the pointer G indicating $2\frac{1}{2}$ inches back from the external margin of the symphysis in



Photograph No. 5. (See page 526.)

the midline, localizer on the X tube being lined up with G. Indicator F is now removed and exposure made.

Technic of the different measurements is approximately the same as in the foregoing.

Photograph No. 6 (see page 529).

Modulus is not in sufficiently close approximation to pubes. It should come into actual contact, and $\frac{1}{2}$ inch below upper margin of brim.

Photograph No. 7 (see page 530).

Brim exposure indicating excellent technic, with measurements resulting.

In computing measurements, take distance in millimeters from the desired points and divide by the millimeters represented as the distance between three points of the

modulus. The answer may be read as inches or reduced to millimeters, by multiplication by 25.4.

Photograph No. 8 (see page 529).

Ischial spine measurement.

Points A A measure on the print 105 mm.

Ratio B B is 30 mm. to inch; 105 divided by 30 equals 3.5 inches or 8.89 cm.

The $3\frac{1}{2}$ inches (8.89 cm.) ischial spine measurement represents a distinct contraction, as the average distance between these points should be 10.5 cm.

Owing to space, tuberosity measurement is not presented. The technic is exactly the same except that the widest flare of the inner surfaces should present in order to receive proper points for measurement.

Photograph No. 9 (see page 531).*Brim picture No. 9 presents:*

<i>Negative measurements</i>	<i>Ratio</i>	<i>Actual measurements</i>
Obst. Conj.	170 mm.	32
Transverse	184 mm.	5.3 inches
R. Oblique	175 mm	5.7 inches
L. Oblique	180 mm.	5.46 inches
		5.6 inches

Photograph No. 10

This photo represents the bony pelvis in the lateral view between points A and B



Photograph No. 6. (See page 528.)

as 12.2 cm. The enlargement ratio of the modulus is 29 mm. to the inch. Divide 29 into 122 (mm) and we have 4.2 plus. Discard the fraction plus and multiply by 25.4 and we receive 10.66 cm as the correct sacropubic axis.

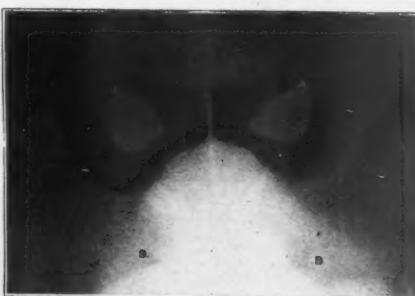
For the Doubting Thomas, a silver dollar has been placed on the same plane. Subjecting this image to the formula, 3.8 cm is the result, which is correct for the coin. If the measurement for the coin is correct, the sacropubic diameter must be, with the mathematics above suspicion.

Plate Indications of Correct Technic

Brim Picture.—Promontory of the sacrum should be nicely in evidence; spinal foramen of even proportions and distances between iliac crests and spines of sacrum equal.

Ischial spines tips should be equidistant from the linea pectinea.

Tuberousities of the sacrum should lie under the pelvic brim and not apparent.

Ischial Spine Measurements.—Ischial

Photograph No. 8.

spines should lie in obturator foramina and be equidistant from the margins.

Tuberosity Measurement.—Tuberousities should present a sharp outline of the inner margin at the widest flare.

Sacropubic diameter should be a straight line and give no evidence of the circular brim the sacrum presenting laterally.

The Modulus should invariably present symmetrical enlargement and will do so if



Photograph No. 10.

no tipping of the coefficient is permitted. Distances should be equal between the points with correct manipulation.

Photograph No. 11. (See page 529.)

The case record is graduated in centimeters square and allows for an exact tracing of the pelvic picture dimensions for comparison with the average pelvic dimensions, both inlet and outlet.



External Measurements	
Trochanters	13 inches
Crests	11 inches
A. Spines.....	10.5 inches
Ext. Conj.	7.75 inches
R. Oblique	9.5 inches
L. Oblique	9.25 inches
P. Spines	4.75 inches

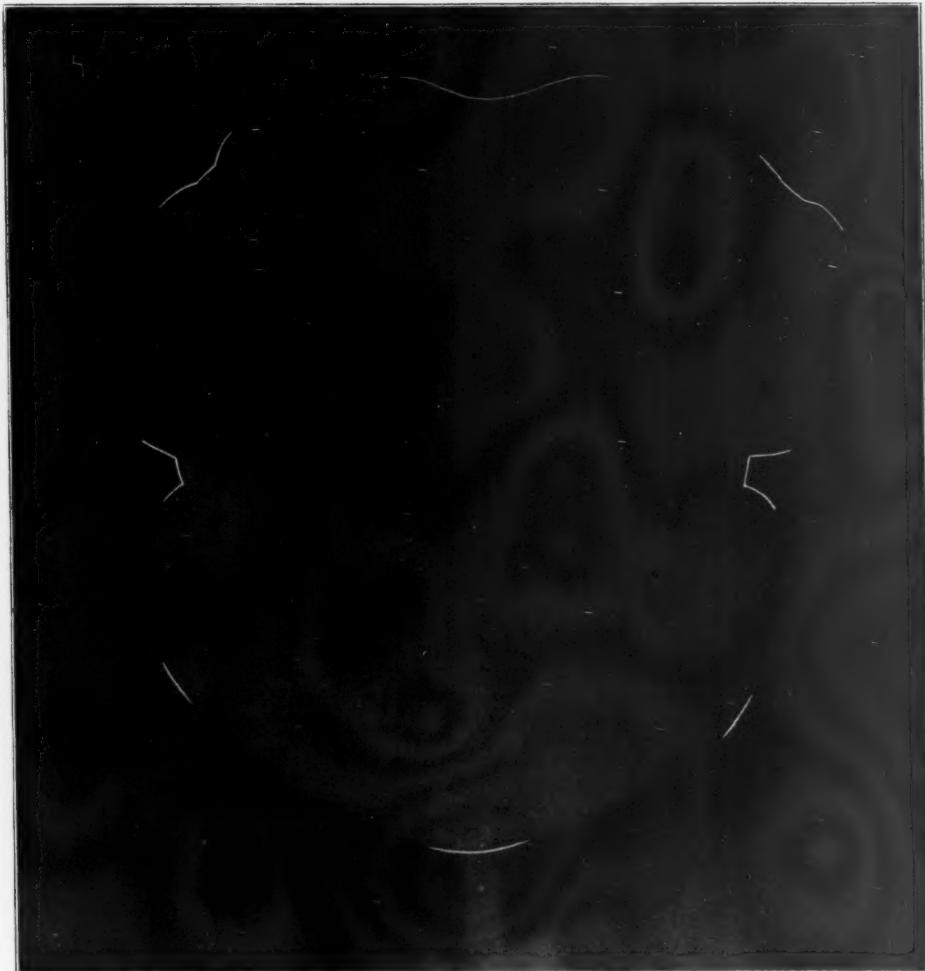
Photograph No. 7.

Enlargement ratio is 36.4 mm per inch and this amount is divided into each of the diameters presented.

Transverse	5.2 inches
Obst. conj.	4.8 inches
R. Oblique	5.06 inches
L. Oblique	5.01 inches

Indications in Contracted Pelvis (Jung)

GRADE 1 Flat Pelvis	9 to 11 cm	Slight defects to 9 cm forceps. In a T C not less than 8. Version rather than forceps.
GRADE 1 Generally Contracted	9.5 to 11 cm	Contraction usually causes little concern. Forceps rather than version in contraction of slight extent.
GRADE 2 Flat Pelvis	6.5 to 9 cm	Cadwallader states that a T C less than 9 demands some other operation than forceps or version. A true conjugate below 8 rarely delivers spontaneously. Fetal mortality of 30%. T C below 8.5 requires assistance in over 50%.



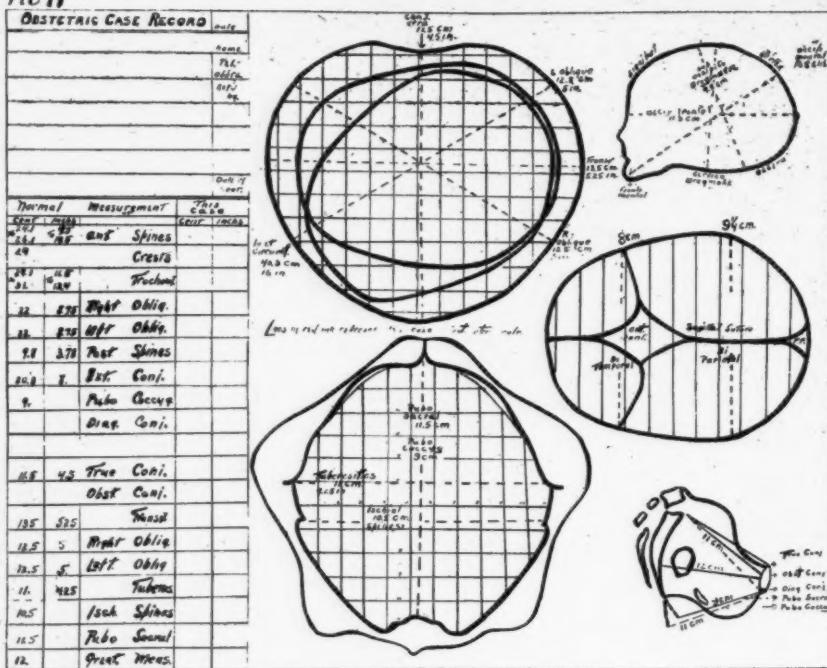
Photograph No. 9. (See page 529.)

GRADE 2 Generally Contracted	7 to 9.5 cm	Spontaneous delivery occurs in 80% Prophylactic version not recommended (fetal mortality 70 to 80%). Perforation necessary with dead fetus. Unsuccessful high forceps may mean infection.
GRADE 3 Precludes possibility of birth up to 5.5 cm.		Treatment is by cesarean section. Neither living nor dead child will be delivered except by that operation.

Indications as Outlined by King

Conj. between 4 and 3.5 inches.	Forceps. Version. Symphysiotomy.
Conj. between 3½ and 2¾ inches.	Cesarean section if child is alive; Craniotomy if dead.
Conj. between 2 inches or less.	Cesarean section always. Craniotomy excluded whether child is dead or alive.

No 11



Photograph No. 11 (see page 529).

Indications as Outlined by Shears

GROUP D

Int. conj. between 8.4 and normal.

GROUP C

Int. conj. between 8.4 and 7.3.

GROUP B

Int. conj. between 5.5 to 7.3.

GROUP A

Less than 5.5.

Moderate Contraction.—These are the cases in which greatest difficulty is met. May deliver spontaneously. Forceps may succeed. At times version results happily.

RELATIVE CONTRACTION.—Treatment, in 7.5% or less is, Cesarean Section with full-term child. Forceps in 7.5 or less with inexperience is more dangerous than section, or as much. *It is impossible to extract a living child naturally.*

ABSOLUTE CONTRACTION.—Only Cesarean Section will suffice. Not even craniotomy will permit extraction of the fetus. Labor may be induced early.



Overmedication in Infancy and Childhood*

By JAMES D. LOVE, M. D., Jacksonville, Florida

EDITORIAL COMMENT.—Doctor Love's criticism of the all-too frequently prevailing custom of overmedicating infants and children is fully justified and merits wide publication. It is for this reason that we have requested permission to reproduce the article presented by him to the Southern Medical Association.

Like Doctor Love, we do not hold ourselves blameless. Sometimes, it requires a strong and emphatic sermon, such as is herein contained, to bring home our sins of commission as of omission. We feel confident, however, that we, all of us, will benefit from the appeal made by Doctor Love and that we shall take to heart the lesson promulgated so often that, in infants and children especially, the simplest possible remedies and measures are least likely to produce harm. Here particularly, the NIL NOCERE should be observed faithfully.

BETWEEN the physician habitually given to overmedication and the medical nihilist there is little that lends to a choice.

In extenuation of the guilt of the former, it may be said that, in some instances, he is so imbued with faith in drugs that he unwittingly lends himself to their abuse. Concerning such a physician, there is always hope that, with conservatism engendered by experience and with increasing accuracy in diagnostic attainments, his serious fault may be overcome. As to the medical nihilist, the scoffer and disbeliever in the value and potency of drugs, I see not a ray of hope for his future usefulness as a member of the medical profession. Such a man has lost hope in himself, has lost confidence in his ability to handle the tools of his profession and should be assigned a place in the ranks of one of the drugless cults to which he properly belongs. Often such a physician is found congratulating himself on his self-styled forward tendencies and is probably unaware that his lost confidence in the potency of drugs is due to his ignorance of their proper employment. With loss of faith in himself and his profession, he becomes a medical bolshevist, ever revealing his insatiate craving to destroy and overturn the established order of things. Unhappily, a certain element in every community is too ready to lend a listening ear to the expressions of his fanatical doctrines and he becomes an agency for evil that must be

reckoned with. As evidence of this truth, witness the doubt engendered through the numberless quotations from the facetious writings of one of the world's most famous medical nihilists, Dr. Oliver Wendell Holmes, a man who was as great a failure as a physician and pharmacologist as he was justly renowned as a humorist. (However, Holmes was an anatomist. Also, his fame rests secure for his insistence on the infectious nature of puerperal fever.—Ed).

In a separate class from the nihilist, we often find men with the profoundest faith in themselves, with an unsullied love for their science, men who, like Sir William Osler, have contributed vastly to their profession, but whose expressions, aphorisms and teachings have been so distorted by a prejudiced portion of the world as to lead to the erroneous conviction that they, too, belong to that class of skeptics who have no rightful place in progressive medicine. When Osler wrote that "He is the best doctor who knows the worthlessness of most medicines", he but expressed a truth we all admit without decrying those drugs we know to be beyond value. And Osler himself, misquoted and misunderstood as he was, would have been among the last of physicians to deny the true therapeutic worth of the drugs he was accustomed to employ.

Robert Bartholow, one of the most learned pharmacologists and most brilliant scientists who has ever graced the medical profession, expressed a truth when he said: "He who despises his art can never become a great artist. Good practitioners are always found to be men entertaining the greatest confidence in the powers of med-

*Chairman's Address, Section on Pediatrics, Southern Medical Association, Fourteenth Annual Meeting, Louisville, Ky., Nov. 15-18, 1920.

Reprinted from *Southern Medical Journal*, (Jan. 1921), with permission of the Editor.

icine." For honest doubt, I have the profoundest respect, for, in connection with intelligent observation, it has enabled us to discard much that is useless in medicine. I decry those expressions of doubt born of mental inertia, of disappointment, of craving for notoriety.

Overmedication No Better Than Therapeutic Nihilism

But, let us not, in our condemnation of the medical nihilist, forget the more frequent, if not more grievous, offender, the physician who habitually overmedicates his patients. Owing to the comparatively helpless state of infants and young children, owing to the obscurity of some of their states of illness which may lead the physician to a blind groping for a proper agent of relief, and owing to the appeal a baby's helplessness makes to anxious and solicitous parents, this class of patients is probably more frequently subjected to over-medication than are adults. As physicians, we can not salve our consciences with the puerile plea that the laity, more often than ourselves, are given to overdrugging our little ones. That catnip, castor oil and the stuff that babies are supposed to cry for, seem to be the natural heritage of most of our little patients, is a true indictment against those of us who, through indifference or a distaste for the dissemination of educational propaganda, lend sanction to the promiscuous employment of such comparatively innocuous agents.

When the secular press abounds in advertisements extolling the virtues of proprietary nostrums for the relief of every disturbance of infancy from constipation to poliomyelitis, the eagerness displayed by anxious parents for the employment of drugs is not to be marveled at. Especially should we condone this parental offense in view of the obvious but lamentable fact that a vast number of our medical men give more heed to the teachings of the man introducing proprietary medicines than to recognized authorities on *materia medica* and therapeutics. In this connection, it goes without saying that the physician whose chief armamentarium is the product of proprietary medicine houses, who habitually prescribes ready-to-be-dispensed mixtures, the very ingredients of which he is ignorant of, cannot possibly hope to advance his knowledge of pharmacology or contribute

anything worth while to our knowledge of therapeutics. No matter what results he secures, be they good or bad, he cannot intelligently attribute these results to the action of any particular drug.

Single Drugs vs. Combinations

I grant the synergistic action of certain drugs and commend the employment of combinations of drugs that are chemically compatible and akin in physiological action: but, for obvious reasons, when the welfare of our patients is not jeopardized, I would strongly advocate the use of single drugs rather than of combinations. In medicine as in war, a like rule obtains. The wise military commander conserves his forces and does not employ a regiment to accomplish what may well be done by a single soldier. And, in combating disease where a desired end can be secured through the use of a single drug or agency, the accomplished physician does not call into action all the cohorts of *materia medica*.

We must concede that a drug is to be administered only with a definite end in view, that the physiological action of the drug must be understood, that results cannot be wisely interpreted when they follow the employment of indiscriminate mixtures, that the ability to pass impartial judgment on the results of his therapeutic endeavors constitutes the chief asset of the accomplished physician. It is not true that our patients expect or demand of us a new prescription with every visit. They no longer estimate a physician's worth by the multitude of drugs employed. Those of us who can only justify our visits by the prescribing of additional remedies sooner or later forfeit the very confidence and respect we are seeking to retain. The constant changing of prescriptions in itself betokens a lack of confidence in our efforts which of necessity must be transmitted to our patients. Often, a word of encouragement and good cheer will accomplish for anxious parents far more than the prescribing of additional drugs.

Even the placebo finds but occasional justification and, then, only as a concession to a faltering confidence or an inherited prejudice that demands for its propitiation the systematic use of drugs. Intelligent cooperation on the part of patients can only be secured when, through our teaching, they have secured a working understanding

of the existing conditions and our efforts to combat them. With their cooperation, there can almost always be found a fairly safe passage between the Scylla of ultraconservatism and the Charybdis of empiricism.

Abuse of Quinine and Other Drugs

Throughout the South, there is probably no agent more widely employed, more potent for good or more grievously abused than quinine. We find it being employed in the treatment of nearly all febrile conditions of obscure causation, the single plea to justify its use being that it is wise to eliminate any possible malarial element. As a consequence of this abuse, we not infrequently find our little patients suffering more from the effects of nauseous and mawkish quinine mixtures than from the illness it is used to combat. Their stomachs have become intolerant to food and needed medication, their nervous equilibrium disturbed, puzzling cutaneous conditions produced and the whole course of the illness altered for the worse. The frequent and indiscriminate use of calomel, by Southern physicians and the laity, is equally to be deplored. Every case of fever does not call for the administration of quinine and calomel, though in the minds of many of our physicians there seems to be the deep-rooted conviction that, for the treatment of most febrile conditions, these two drugs must go hand in hand, inseparably linked, the David and Jonathan of Southern materia medica.

Owing to overmedication, how often do we find children with infectious diarrhea literally robbed of their last chance to survive this fatal malady! Their stomachs have been rendered intolerant even to water and the blandest nutriment. Through the injudicious use of opium, a case of moderate intensity has been converted into one of profound toxicity. Most earnestly do I protest against the routine use of opium in the acute stage of infectious diarrhea. Parents are not aware that the increased activity of the bowels may be the saving factor in the disease and, naturally, they expect us to check what to them is the most obvious and dangerous symptom of the illness. That we all too frequently yield to their supplications, is an evidence of weakness as lamentable as dangerous.

What class of cases are we more fre-

quently called upon to treat than the constipated child who, from earliest infancy, has been the victim of overmedication. Where dietetic measures should have been employed and regular habits cultivated, we have resorted to or countenanced the use of laxatives, purgatives and glycerin suppositories.

Day after day, we see the child with enlarged glands being drugged with iodides when a source of infection, such as carious teeth or diseased tonsils, has been disregarded as the causative factor. All too frequently we witness efforts to remove the edema of nephritis by the use of digitalis and the caffeine group of diuretics. This is an extremely widespread abuse of drugs, which, through adding to the existing renal congestion, do infinitely more harm than good.

How often are our pneumonia patients made worse, their appetites destroyed and digestion impaired by the routine use of expectorants and sedatives! When we know that most of these cases do better with a minimum amount of medicine—and then only when positive indications for such exist—it can only be that lack of moral courage on our part accounts for over-medication.

Our typhoid patients are given the so-called intestinal antiseptics literally ad nauseam, when only untoward symptoms justify the employment of drugs. Too much cannot be said in denunciation of the physician who treats every case of heart disease with digitalis or drugs of any nature. In epilepsy and nervousness, the bromides, by inducing physical weakness and befogging intelligence, often do more harm than good. Iron and arsenic will not overcome a primary anemia or one due to intestinal putrefaction or to some focal infection; neither will tonics bring about constructive change or restore a lost appetite till the cause of the indisposition has been removed. A diagnosis of tuberculosis by no means calls for the simultaneous prescribing of codliver oil, nor is there justification for the use of any drug in this affection that impairs the functions of digestion and assimilation.

The silly use of vaccines for almost every ill of childhood has very properly lost to many physicians the love and confidence of their little patients. While admitting the not infrequent efficacy of vac-

cines in a few conditions, I am by no means an ardent exponent of their promiscuous employment. I am sure that, in the past as at present, virtues have been imputed to vaccines which they by no means possess. When they are employed in connection with drug therapy, one may well be at a loss to determine which of these agencies are responsible for any result secured; yet, however insignificant may have been the role enacted by the vaccines, all too frequently they are given undeserved credit by a credulous doctor and an impressionable public.

In cases of illness where a known specific exists, we should treat the disease. Where a specific is not known, treat the patient; and give drugs only when a positive indication therefor exists.

If a man is disposed to lend an ear to reason, and most physicians are, nothing so goads him to introspection and the forming of new resolutions as the friendly criticism of his colleagues. I beg, however,

that my remarks on overmedication be construed not altogether as critical, but as an earnest plea for your cooperation in overcoming this widespread abuse. You, gathered here, are leaders in your profession, are moulders of public opinion, and daily serve in an advisory capacity both to other physicians and to influential citizens of your community. By offering an active opposition rather than a passive indifference to the tendency of parents to over-medicate their children and by friendly council to your colleagues, much can be done toward correcting one of the most flagrant abuses known to the medical internist. I confess to the frequency of my own transgression of the laws I am advocating and renounce any claim to special immunity from censure. In extenuation of my seeming critical attitude toward my colleagues, I plead the ease with which we discern the mote in our neighbor's eye while overlooking the beam in our own.

Bacterial Vaccines in Gonorrhreal Infections

By A. B. BARKER, M. D., Peoria, Illinois

EDITORIAL COMMENT.—Doctor Barker's discussion, presented herewith, actually constitutes a reputation of certain assertions advanced by Dr. J. T. Geraghty which are unfavorable to vaccine therapy. It is another instance of adverse academical pronouncement running contrary to favorable clinical experience. Incidentally, the importance and superiority of polyvalent vaccines is well borne out by Doctor Barker's argument.

IT seems impossible that there should be a divergence of opinion on a subject that appears so positively clear as the benefits obtained from the use of bacterial vaccines in the treatment of acute and chronic gonorrhreal infections. Yet, in *The Journal of the American Medical Association* (Jan. 1, 1921, p. 35, Doctor Geraghty makes this statement: "It can be stated definitely that gonorrhreal vaccine or any of its modifications are utterly useless in the treatment of acute and chronic gonorrhreal urethritis." That such a conclusion should be based on clinical observations after the consistent administration of a gonococcus-combined bacterin (I use the

word *combined* advisedly, because mixed infections early prevail and are important elements in gonococcus infection), seems impossible in the light of my own clinical experience.

After an experience of twelve years in treating gonorrhreal infections, during which time I have treated several hundred cases, I surely am in a position to draw conclusions. In the acute cases, that is to say, during the first few days to a week after the onset, characteristic changes in the clinical symptoms will develop within one or two days after the administration of a proper bacterin. The irritating, burning pain in the urethra will usually be gone;

in some cases, the discharge has become very thin, consisting mostly of serum mixed with pus cells; the swelling in the infected urethral membrane will be lessened to such an extent that the urine may be passed with much less pain. If the vaccine injections are repeated at less than three-day intervals, for the first week, and at somewhat longer periods after that, a favorable regression of the acute symptoms will continue until the patient is cured, which usually takes from two to four weeks.

To eliminate surface infections beyond the influence of the antibodies in the circulation, local treatment is employed to advantage. In epididymitis, relief from pain, with a subsiding of the inflammation is obtained within eighteen to thirty-six hours. The vaccine is injected subcutaneously at one or two-day intervals. If treatment is started during the first or second day after the onset of symptoms, not enough of a destructive process will have developed before the infection subsides; to materially injure the epididymis.

Such results are not obtained uniformly by any other treatment. In his book, entitled "The Systematic Treatment of Gonorrhœa," N. P. L. Lumb shows statistically that vaccines are of advantage in both, acute and chronic infections. In chapter IV, page 44, he says:

"Foremost is vaccine as an aid, not only in preventing complications but in materially assisting a cure. An experience in some thousands of cases, treated from the earliest stages on this plan, has confirmed the view that vaccines are equally of value in the acute as well as in the chronic stage. A mixed stock vaccine gives the most satisfactory results." In the *British Medical Journal* (Oct. 6, 1917, page 450), he reports on 500 consecutive cases of gonorrhœa treated with vaccines, showing a material reduction in the duration of the disease; and he attributes the permanence of the recoveries to the good effects of the vaccines employed; relapses having been observed in less than 1 percent of the cases.

V. C. Pedersen, A. M. M. D., F. A. C. S., in his textbook on Urology, when discussing vaccine therapy in the treatment of gonorrhœal infections (page 515) says in part:

"Autogenous gonococcal bacterin is difficult to secure as already stated, so that standard stock products are the rule; and,

furthermore, a mixed vaccine in which the gonococcus and one or more of the pyogenic organisms are combined may be indicated because, in many lesions, the gonococcus is not present alone, particularly in rheumatism, so that a pure gonococcal bacterin will fail through omission of the associated organisms."

Dr. Pedersen's conclusions are in accordance with my clinical experience. In many cases in which autogenous vaccines failed, polyvalent stock vaccines gave very gratifying clinical results. This may be accounted for on the theory that the system has become so accustomed to the particular strain of bacteria which it harbors, that it fails to respond to a bacterial suspension made from that strain alone.

Successful practice of vaccine therapy, in my judgment, requires an understanding of the essential elements which enter into the antigenic efficiency of bacterial suspensions. The disregard of these elements in my experience results in failure. The chief factors of disappointment are:

1.—The bacterial suspension may have been prepared from feeble and degenerated organisms or it contained only a single strain of bacteria, so that it fails to stimulate a sufficient immunizing response. The best bacterial suspensions are made from healthy virulent organisms and are polyvalent so that the immunizing mechanism is aroused against the infection intensively. To illustrate, in a pure gonococcus infection, a polyvalent bacterial suspension consisting of virulent gonococci taken from many sources often acts more dependably than a suspension made from a single strain of gonococci, even when this is taken from the patient's own organisms.¹

2.—The bacterial suspension may have been prepared in such a manner that injury of the bacterial protoplasm resulted; the heat sterilization employed in making bacterial suspensions in private bacteriological laboratories often is carried to excess and may be responsible for the resulting inert suspensions.

3.—The vaccine may not have corresponded completely to the infection. In

¹The Editor ventures to voice his doubts as to the actual superiority of autogenous bacterins. It is possible that cultures from the patient's own strain of microorganisms are not suitable for immunization; because this particular strain has become accustomed, or resistant, to the individual antibodies, while exogenous strains of the same microorganism are capable of producing a satisfactory immunizing response. If the individual, organic resistance were sufficient to counteract the pathogenic action of the endogenous bacteria, disease would not have developed. This view is offered for what it may be worth. The Editor is well aware of the fact that it is at variance with accepted opinions.

other words: From a bacteriological standpoint, the vaccine did not coincide, in its make-up, with the bacteriology of the infection. That is to say, the strains and species of the organisms found in the vaccine were not representative of the strains and species of the organisms in the lesion.

4.—The vaccine may have been employed while neglecting other indicated therapeutic measures. Local antisepsis, wherever practical, is essential in conjunction with constitutional immunization. General therapeutic, hygienic and dietetic indications should not be neglected.

5.—The vaccine may have been employed too late. By administering early a polyvalent bacterial suspension, in acute infections, favorable results may be predicted confidently. Delay lessens the chances for success proportionally.

6.—Timidity in dosage and irregularity in administration may have characterized the employment of the vaccines, or the treatment may have been continued for an insufficient length of time to eradicate the existing infection thoroughly.

Careless and loose thinkers, who never have had sufficient practical experience with polyvalent bacterial suspensions, have raised their voices warning against possible malign effects following their use. However, fortunately, such unjustified advice has been counteracted by the convincing and definite literature on the subject.

The non-specific and specific action of vaccines has not been sufficiently studied to appreciate the importance of the collateral immunity. However, this does not necessarily imply the denial of the specific actions of vaccines.

Dr. Geraghty says that the results obtained from gonococcus vaccines are non-specific; that similar results are obtained from other vaccines and that dangerous reactions are sometimes obtained. Evidently, he is getting shock-therapy from the intravenous use of vaccines confused with immune therapy used subcutaneously. Shock-therapy from the intravenous injections of vaccines, or proteose, resulting in a characteristic chill and fever, is always dangerous. Dr. Geraghty would lead us to believe that such reactions might follow the subcutaneous use of vaccines. Notwithstanding, this is not the case. Vaccines used subcutaneously and in standard dosage are harmless.

Dr. Geraghty can not refer to clinical

evidence, that was published as a matter of record, to show that gonococcus vaccine, injected under the skin, has ever produced alarming symptoms, nor have I ever seen the least bad effects from their use in my extensive clinical work.

Bacteriotherapy Today

Bacterins have had their ups and downs; but, probably their fate has been no different from that of a great many medications which are today used by the majority of physicians. First heralded as a remarkable cure for every bacterial disease, they swept the medical profession by storm. Their wide and uncritical use by men, who gave little thought as to whether or not they were indicated, soon brought dispute upon the products, and those who formerly were ardent advocates of bacterin therapy, became its worst enemies.

Today, we see the pendulum swinging the other way. We recognize the fact that bacterins can not be used indiscriminately, but we do know that they have, as nothing else has, the direct power of stimulating the specific resistance against the same kind of organisms as those that are used in the bacterin.

In the case of typhoid vaccines and even the mixture of typhoid, paratyphoid A and paratyphoid B, we have no dissenting views. Everyone is agreed as to their value. In the case of the type-pneumococcus vaccines, we find that those who are keeping abreast of the times are also charitable and recognize the fact that these agents have definite immunizing powers. Against all others, however, there are still some men today who are taking a very arbitrary stand by condemning them in toto, refusing to listen to any argument in their favor. True, there are some things that we do not know about bacterins or bacterial vaccines. However, just as truly are there many things that we are learning almost every day, and it is quite interesting to note that the opponents of bacterin therapy are slowly but nevertheless surely yielding their ground. Only a few years back, it was impossible to convince some of the men who are hypercritical that it would be possible to immunize a patient simultaneously against typhoid and the forms of paratyphoid. Today, everyone accepts this as a fact.

Even a few months past, it would have been impossible to have obtained recognition for a pneumococcus vaccine. Today,

due to the work of Cecil and Austin, and Dr. Parke and his collaborators at the New York City Bureau of Laboratories, not to mention the work done in the Army, we have become convinced of the fact that the type-pneumococcus, as well as the streptococcus vaccine, does have a demonstrable potency in preventing and even influencing favorably the disease.

It is true, there have never, as yet, been reported large series of controlled experiments demonstrating the efficiency or inefficiency of the popular mixed bacterins; but, surely, we can not ignore the experiences of the vast number of physicians who are practising medicine and who have practised medicine every day for many years. These men are scientific men. They are not ignorant. They have seen these same diseases before and know when they are getting results. It is also true, however, that probably none of these physicians, who have used bacterins in every case, have always obtained 100 percent results.

Evidently, there are factors which as yet we do not understand. But, does this justify men in taking an arbitrary stand

and refusing to accept bacterins until they have been proven 100 percent perfect?

Theoretically, they maybe right. Practically, we can demonstrate that these preparations have the power of stimulating the production of specific antibodies. Still, a clinical study can not be made as easily as a laboratory investigation.

Bacterins can do no harm. Even their opponents admit this fact and, really, it was the overzealous use of bacterins in acute infections, during the influenza epidemic, that demonstrated their value in the treatment of these febrile conditions.

I do not feel that bacterins are specific for every bacterial disease, but I do feel quite strongly that they have power of stimulating the formation of specific immune substances and, in this respect, have a very important part in the immunization against and treatment of disease. Many doctors who are opposed to bacterins are those who do not use them and who admit that they have not used them for some time. The enthusiastic advocates of bacterin therapy are those men who are using them and have been using bacterins for several years.

Prescribing a Climate

By HENRY B. HOLLEN, Ph. G., M. D., Chicago

NO physician is without a patient who, some time or other, but might greatly benefit by a change to climatic conditions more favorable than those at home. The northern winter is anything but kind to the convalescent, whose long illness leaves him little resistance or rich blood to warm him. A fresh crop of trouble is in store in that season for one having diseased air-passages or chronic bronchitis, for example. The aged live precariously. Even the neurasthenic is adversely affected under a leaden sky, in the sunless days.

Apart from them are the asthmatic, the hayfever patient, the tuberculous person, the neurotic needing diversion, the over-worked business man and many others. At critical times in life, a sojourn in some well selected place is highly beneficent, keeping one in the running, cheating death, perhaps. Nor should they be forgotten whom chance has thrown out of logical

position and ambition led astray. Such people may be called geographical misfits. For, assuredly there are men for every latitude and some, no doubt, are trying in vain to maintain a state of health in the north, say, who by nature were intended for a softer, balmier clime.

Unfortunately, this bearing of climate on health and disease is not considered as it should be. Few physicians know the health resorts of their own country, even. The little information they have is usually derived from hearsay or from advertisements. Much of this being incorrect, they are scarcely in position to give advice and, when they venture to do so, the patient is prone to be sent to the wrong place.

All sorts of misconceptions abound and much vagueness. For instance, I have been interrogated in this wise:

"Tell me, what is the climate of California like?"

To which I could only reply:

"You mean the climates of California; we have forty if we have one."

And, then, if minded to do so and time allowed, I would elaborate on the climatology and seek to explain away the many false notions that people in general have of it.

What the Pacific-Coast Climate Offers the Invalid

In the first place, the area of this western state is immense, covering 160,000 square miles; in the next, it is shaped like an irregular parallelogram measuring more than a thousand miles from end to end, ranging between very wide latitudinal limits, by reason of this longish shape, so that at the same level one finds a climate in the north portion vastly different from that in the south portion. But, further, there is proximity to sea and desert to reckon with in California and altitude as well as latitude. Within her borders are lofty heights, as that of La Jacinto, which most of the time are covered with snow, and mesas, as those back of San Diego, where a quality of air prevails that is quite like that of north temperate regions; besides foothills of moderate elevation, like those about Hollywood, and valleys at sea level and below, all with conditions peculiar to themselves.

Even the narrow coastal area from Santa Barbara to the Mexican frontier affords a diversity of climates that is startling. At the seashore, the heat of summer is virtually unknown. Ocean Park, a beach town near Los Angeles, is a delightful place in the midyear months; here upon the crescentic shore of beautiful Santa Monica Bay, into which the Sierra Madre range juts picturesquely into the blue waters to the north, the hayfever suspect may live year after year without his customary woes, enjoying life like any normal person. But inland not so very many miles, at or near the same level, the heat may be intense. Pasadena, for instance, knows many sultry days. High up in the mountain camps, though, at an elevation of 5,000 feet or so, it may be cold enough for wraps on the same afternoon that residents in the lowlands at their base find the thinnest dresses desirable. And, while the noon temperature at the beaches may not exceed sixty, in the desert no great distance away it may be well above the hundred mark.

No need to search here for a place in

the sun; all this land lies in the sun. But its heat is variously tempered as I have indicated, which has to be considered when choosing a climate; as have also the conditions of atmosphere, whether dry or moist; the altitude, the wind currents, fogs, and so on.

At San Diego, while the humidity is not excessive for the seacoast and is unnoticed by the well person after the first few weeks, the rheumatic usually finds his trouble aggravated; he will do better in the drier air of her back country. This also applies to persons afflicted with bronchial asthma. By going only a few miles back from the water, a spot may be found that may suit perfectly, behind a thicket of peppers or eucalyptus, or in valley or ravine behind sheltering hills, where the sunshine may be had without the winds and where the air is fairly dry. Also, one avoids the fogs in the back country. The coastal fog anywhere below Point Conception is rather enjoyed by most people; it is sometimes dense but neither so begrimed nor as chilling as are northern fogs. Still it is wisely avoided by a certain class. Nor should the tuberculous be directed to this coastal area. I have seen patients decline rapidly in Los Angeles. In fact, it is quite common among newcomers for a hemorrhage to lay one low or for a latent infection to flare up in a way that allows for no dilly-dallying. Banning, at the edge of the desert, is a suitable place for such cases; so is Palm Springs. Sanatorium accommodations may be had in either place, if desired, although as yet provided only on a small scale. Other good locations, but not quite so good, are in the citrus belt east of Los Angeles, one being Monrovia, where there is a large institution, and a second, Redlands, which is one of the prettiest of inland towns.

Selecting the Resort Is No Perfunctory Affair

At the seashore, sunlight is reflected as by a huge mirror. There, also, the actinic rays of the solar spectrum are operative to a greater degree than inland save at high altitude. Hence, the excellent results obtained in a wide range of cases, including nervous debility, anemia, diabetes, mental fatigue, indigestion with or without toxicosis, senility, neuralgia and obesity. Other factors assist. The ocean has an appeal that most people feel strongly. Its tang is pleasant to the nostrils. Propri-

tious breezes from off its great blue expanse temper the torridest sun and freshen the air, giving it tonic properties. Its clean white sands provide a couch for healthful drowsing in the open.

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The great southwest of much sunshine and little humidity, and with a climate permitting one to pass virtually all his time out of doors, has long furnished a refuge for consumptives. But, one may easily go wrong unless intelligently advised. There are many factors to consider. Unless the patient goes fully instructed and is made comfortable as well as contented, and kept more or less closely under observation, it is best not to transport him at all but to care for him at or near home as well as possible. At Tucson, Arizona, are several sanatoriums, with sleeping porches and other appurtenances, some consisting of detached cottages, an arrangement that has

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Many things have to be considered in dealing with this class of patients; as, how far the disease had advanced, whether partially arrested by fibrosis or otherwise, if bronchitis with dilated respiratory passages complicates, the heart and arterial condition, the general vitality, accommodation to low temperatures, and so on.

The effect of altitude on all persons needs to be watched. Neither the low barometric pressure nor the cold air of mountain resorts are well borne by those having unsound heart muscles or calcareous arteries. Such persons may show a soft and rapid pulse, breathlessness, headache and insomnia.

How easily the invalid may go wrong unless well advised, with reference to the peculiarities of a location, becomes apparent when we consider for example the conditions in Mentone. This little town on the north Mediterranean shore is less than one mile broad. Yet, here are practically two climates, due to distribution of mountains and projecting spurs. The east side of the town is several degrees warmer than the west.

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To which I could only reply:

"You mean the climates of California; we have forty if we have one."

And, then, if minded to do so and time allowed, I would elaborate on the climatology and seek to explain away the many false notions that people in general have of it.

What the Pacific-Coast Climate Offers the Invalid

In the first place, the area of this western state is immense, covering 160,000 square miles; in the next, it is shaped like an irregular parallelogram measuring more than a thousand miles from end to end, ranging between very wide latitudinal limits, by reason of this longish shape, so that at the same level one finds a climate in the north portion vastly different from that in the south portion. But, further, there is proximity to sea and desert to reckon with in California and altitude as well as latitude. Within her borders are lofty heights, as that of La Jacinto, which most of the time are covered with snow, and mesas, as those back of San Diego, where a quality of air prevails that is quite like that of north temperate regions; besides foothills of moderate elevation, like those about Hollywood, and valleys at sea level and below, all with conditions peculiar to themselves.

Even the narrow coastal area from Santa Barbara to the Mexican frontier affords a diversity of climates that is startling. At the seashore, the heat of summer is virtually unknown. Ocean Park, a beach town near Los Angeles, is a delightful place in the midyear months; here upon the crescentic shore of beautiful Santa Monica Bay, into which the Sierra Madre range juts picturesquely into the blue waters to the north, the hayfever suspect may live year after year without his customary woes, enjoying life like any normal person. But inland not so very many miles, at or near the same level, the heat may be intense. Pasadena, for instance, knows many sultry days. High up in the mountain camps, though, at an elevation of 5,000 feet or so, it may be cold enough for wraps on the same afternoon that residents in the lowlands at their base find the thinnest dresses desirable. And, while the noon temperature at the beaches may not exceed sixty, in the desert no great distance away it may be well above the hundred mark.

No need to search here for a place in

the sun; all this land lies in the sun. But its heat is variously tempered as I have indicated, which has to be considered when choosing a climate; as have also the conditions of atmosphere, whether dry or moist; the altitude, the wind currents, fogs, and so on.

At San Diego, while the humidity is not excessive for the seacoast and is unnoticed by the well person after the first few weeks, the rheumatic usually finds his trouble aggravated; he will do better in the drier air of her back country. This also applies to persons afflicted with bronchial asthma. By going only a few miles back from the water, a spot may be found that may suit perfectly, behind a thicket of peppers or eucalyptus, or in valley or ravine behind sheltering hills, where the sunshine may be had without the winds and where the air is fairly dry. Also, one avoids the fogs in the back country. The coastal fog anywhere below Point Conception is rather enjoyed by most people; it is sometimes dense but neither so begrimed nor as chilling as are northern fogs. Still it is wisely avoided by a certain class. Nor should the tuberculous be directed to this coastal area. I have seen patients decline rapidly in Los Angeles. In fact, it is quite common among newcomers for a hemorrhage to lay one low or for a latent infection to flare up in a way that allows for no dilly-dallying. Banning, at the edge of the desert, is a suitable place for such cases; so is Palm Springs. Sanatorium accommodations may be had in either place, if desired, although as yet provided only on a small scale. Other good locations, but not quite so good, are in the citrus belt east of Los Angeles, one being Monrovia, where there is a large institution, and a second, Redlands, which is one of the prettiest of inland towns.

Selecting the Resort Is No Perfunctory Affair

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broken; consequently, when permanent residence is established here, a trip north every summer or alternate summer, for instance to the Carolina mountains or to Maine, is quite advisable. In winter, provided one goes far enough south, Florida affords benign shelter for those who do not bear cold well. St. Petersburg is a haven for the graybeard who there may sun himself the long day through upon her numerous green benches and, with others like him, hark back garrulously to the time when he sold his farm and moved to the city, and beef was had for twelve cents on the hoof.

The town is fortunately situated. It occupies a semiinsular position, with the Gulf of Mexico full before her and Tampa Bay behind. Hence, the cooling breezes that come almost unfailingly and are so welcome in the mid-afternoons. To north and south, are piney woodlands where, in the early eighties, Dr. Van Bibber would found the sanatorium which has not yet got beyond the dream stage. Enthused, he wrote of the Pinellas Peninsula as being frostless. This is not quite true, however; for, at times, a biting norther steals down like an unbidden guest, smiting the young groves and setting the half-clad darkies to shivering. For such emergencies, one must be prepared.

On the east coast of Florida, is a string of resorts; but most of them at times feel the sting of lusty winds, in some winters more than in others. In truth, the warmth and flora of the semitropics are scarcely to be enjoyed short of Miami. Those needing diversion rather than rest will find it there. Her narrow streets are taxed; her hotels crowded to capacity; and this is true of the larger resorts during the three first calendar months of the year. Rest must be sought elsewhere, in the smaller places, as Passagrille and Bellaire. Some patients do best in the interior, at Kissimme for example.

The Land Where Things Can Wait

Cuba is delightful in winter; there, the invalid is quite secure against the cold. The air, though humid, is soft and, when the tradewinds blow, as they do just before sunset, stirring the palms overhead, they have something of an opiate quality, bringing languor, repose and a state of mind that knows no cares. For, this is the land where things can wait; where, if favorably quartered, the invalid may profit both physically and mentally. But it is

not a place for rheumatoid patients. I know one whose trouble was so aggravated after a fortnight at Camaguey that he appealed to Mt. Clemens for relief on his return.

For some, nothing is so beneficial as a sea voyage. Let the objective be Nice, say, which is reached two weeks after leaving New York by the boats of the Fabre Steamship Line. Long but contented hours out on deck, wrapped in a steamer rug; escape from vexing business routine; the exhilarating sea air; the food made tempting by the best of cooks, as the French surely are; and the excellent red wine provided with the dinners; all are recreative factors.

Trying the Sun Cure in France

Nice has a climate and flora reminding the traveler of California; but is a finished wintering resort with "pensions" and hotels providing every comfort. There also are the gayety and diversions that cause one to forget his trouble; and there is none of the feverish haste that tries the nerves. The darkling frown of the puritan is absent, which assuredly is something to be thankful for. Nor is leisure in disgrace, as with us; men are neither ashamed of it nor at a loss what to do with it. Those suffering from mental depression are well placed here, where nature is radiant and the first thought is in the interest of play and pleasure. There are beautiful walks to take. The Alps rise up behind the city calling the climber. Many fine excursions may be taken by motor car and tram. There are concerts in the park and Casino, and much else in the way of entertainment.

A number of delightful towns lie to the east and west. Mentone invites the tuberculous, although there are places better protected from the winds, as Cimiez and Beauvieu. St. Raphael has a charming situation. Hyères is a gem in rich setting of verdant hills, palms, agaves and other tropic-like flora. Robert Lewis Stephenson lived for nine months in a chalet just back of the town. He had a garden, he tells us, that looked like a fairy picture. It will be recalled that he was tuberculous and spent much of his lifetime holding the disease at bay.

The average Riviera day is bright almost to dazzling, especially after the mistral has blown leaving the air clear of dust and vapors. Some complain and proceed to put on goggles, but the sunshine here has certain estimable virtues, as I

have seen in a case of laryngitis and other affections. After months of hoarseness, elsewhere, the man whom I have in mind, a singer, here recovered his singing voice in the course of only a few weeks. There is no better place for proving the merits of the sunbath. Still, results hinge on the circumspect application of the natural forces at hand. Abrupt temperature changes, the sudden chilling of the air at sundown, and the regional cold winds, all have to be reckoned with.

From Algiers to the Great Desert

In the spring, a change may be made to one of the Pyrenees resorts or to Switzerland, which is quickly reached by the Simplon route through the celebrated tunnel. There are many locations to choose from, according to the person, his ailment, pocketbook and disposition. St. Moritz is popular both in winter and summer. Davos, at an altitude of 5,000 feet or more calls many who suffer from pulmonary disorders. Montreux on Lake Leman is a favorite spot for recuperation. The mountain excursions to be taken from any of these points conspire, with other factors, to keep the patient in the open.

On the opposite Mediterranean shore, except in an offish winter, unreach'd by cold winds from the north, is Algiers. The new French quarter offers the best of accommodations. Many Europeans have villas on the terraced hills above the town; among them are valetudinarians who have tried one location after another and finally settled here. A hundred miles to the south is the Sahara and there, at rail-end, is Biskra, a truly enchanting town. Within her outer palms, is another world; yet, the health seeker may have a tidy sleeping-room with a real bed and the whitest of coverlets, a beveled dressing mirror, and even an ash tray of fragrant sandalwood atop a modish reed table. Outside the air is soft beyond words and so clear that distance seems annihilated. Close by, is the desert, which has much in common with the sea, the same pure bracing air and a similar unending interest, which both diverts and inspires. The main difference is, that desert air is drier. Here the rainfall is virtually nil and the relative humidity very low. Conditions are most salubrious for certain patients.

In Conclusion a Bit of Caution

It is possible but hardly satisfactory, in the matter of climate, to generalize for any

given class of invalids. Each has needs peculiar to himself which must be studied; aside from his ailment, his likes and dislikes, temperament, mentality and finances, all have to be taken into account. To advise a patient baldly to go south, to send him to this resort or the other without knowing whether it will suit his needs or not, is often a change from bad to worse. While conceding the benefits to be had from a sojourn where climate, water, altitude and other conditions are fortuous, it must be realized that the average person making a change without advice is not absolved from the risk of doing himself serious injury.

The natural forces are potent for good or evil according as they are used intelligently or not. Reckless exposure to sunlight, because all at once in some favored spot freely available to bask in, has brought many to grief; so also has indiscriminate indulgence in sea-bathing, which virtually amounts to a vice on the part of resorters. As a sport it is really fine and invigorating only when the local conditions suit the person and there is ample capacity for reaction. The bather, among other things, ought to know that the best time for a dip is in the forenoon, before the midday meal; never after exhausting work or play; never before breakfast or at night; and never directly after eating. A dilated or otherwise weakened heart may be strengthened under favorable conditions, but people so affected should have an attendant near. Those showing pulmonary disease, however, or having recently had pneumonia, pleurisy or acute nephritis, should never in any circumstances bathe in the sea.

In the foregoing, I have not stressed the psychological effects of a change from the rut and routine obtaining in our rather drab towns and villages to the warm and colorful south. To meet new faces, to see strange sights, to vary the habit as one does when abroad, is profitable. A beautiful prospect of sea or mountains, after the uninteresting prairie lands of our central west, for instance, cannot be other than salutary. In short, all such factors are remedial and restorative, and as such deserve to be highly appraised.

I have said that not a few persons are climatically out of place. I firmly believe this. Business or social motives determine the place of residence, usually. The ma-

jority never inquire whether the conditions are suitable for them, that is, the quality of air, altitude, precipitation, temperature variations and percentage of sunny days. How far this may account for the development of tuberculosis, sciatica, asthma and

other common maladies, can only be surmised. Still, the subject is worth pondering, including the inference that climate is something that may be prescribed in the interest of prevention as well as for curative purposes.

The Adrenal Glands and Their Relation to Modern Medicine

By REGINALD WEILER, B. S., Ph. G., M. D., New York City

Professor of Chemistry at Carver College

EDITORIAL COMMENT.—While it would be an error to designate one or the other of the glands with internal secretions as "most interesting" or "most important," since all of them have essential and vital functions, one can not but be impressed strongly with the wide ramifications and the multiplicity of adrenal activity, in the normal functioning of the organism. Doctor Weiler's study of the adrenal glands constitutes a praiseworthy contribution to medical-journal literature. We are happy to be able to present it to our readers.

History

FROM the moment that the healing art ceased to be a matter of guess work and superstition, and became a science, its advance has been due primarily to the self-sacrificing study of many great men. Boerhaave, of Holland, was the man who, in the seventeenth century, cast aside the haphazard methods that had been practiced up to that time and began a series of orderly observations; that is, laid the foundation of the medical sciences of today. Under the careful ministrations of men like Morgagni, of Italy, Haller, of Switzerland, and John Hunter, of England, this new-born science progressed. Growth, however, was slow and painful, and, had it not been for Bichat, Clifford and their like, working themselves into early graves, Boerhaave's work might have been in vain. Then, Richard Bright, Sir William Jenner, Austin Flint, Harvey, Pasteur, Lister, Koch, and many others too numerous to mention nursed the young science along until it reached its present greatness.

It was left for Brown-Séquard to be the leader in the new field of organotherapy; but his work was premature; for, after his death, absolutely no advance of any consequence was made along this branch of medicine until Charles E. de M. Sajous, the prominent endocrinologist revived the latent study by his great investigations that astounded the medical world.

Thus through the centuries did general

medicine advance. How in all this time did the study of the ductless glands in general proceed, especially the subject of the adrenal glands?

It was not until the year 1563 that the suprarenal capsules were recognized as separate organs. In that year, Bartholomeus Eustachius Sanchoseverinatus first pointed out to the medical world that the little bodies on the kidneys were distinct and independent organs. In spite of the exhaustive study of them, a great many works of anatomy, physiology, and kindred sciences published in the seventeenth century neglected all mention of these bodies.

In 1752, J. B. Wilson published an exact description of the suprarenals and, in 1806, J. F. Meckel compared the human adrenal gland to that homologue in other animals. In 1846, an exact morphological description was given of that gland by A. Echer.

But, in 1855, a greater advance was made in the study of the adrenals than had been made for two centuries. In this year, Thomas Addison published his wonderful work entitled "On the Constitutional and Local Effects of Disease of the Suprarenal Capsule." Addison gave the first clinical contribution to the study, through which more or less permanent interest was aroused.

Since 1898, numerous monograms and single articles dealing with the adrenals have appeared. A few men who have enriched the world with their knowledge

are: Brauer, Diamare, Fusari, Giacomin, Grynfeldt, Kohn, Kose, Pettit, Poll, Saulie, Srdinko, Vincent, Biedl, Wiesel, Falta, Cobb, Gley, Edwin Bauer, Sajous, among others.

The article which now lies before you does not claim complete originality. It is in a large measure but a collection and arrangement of material from the time of Sanctoseverinatus to Edwin Bauer and Sajous. Credit for quotations is not given in the article proper but will appear at the end of it.

Before proceeding into the systematic study of the adrenals and their disease, it is essential to review the basic facts about their anatomy, gross and histological, and about their embryology.

The physiological functions as well as the pathological symptoms are so wrapped up in the structure of the glands, that we must bear the basic facts in mind at all times during the study of the suprarenal glands and their relation.

Anatomy

The various names applied to these bodies are suprarenal capsules, or glands, adrenal bodies, or glands, and other less used names. In French, they are called *glandes surrénales*, and in German *nebenieren*.

The suprarenal capsules are, as is well known, two small triangular bodies, situated upon the upper and front part of either kidney. Their dimensions are: Length, 40 to 50 mm. (about 2 inches). Width, 30 to 40 m. m. (about 1½ inches). The weight of each gland is about 8 Gms. (2 drachms). The gland is divided into two main parts which receive the terms cortex and medulla.

The adrenal medulla consists of a loose network of a columnar masses of cells in close contact with the vascular system. The individual cells are generally separated from the lumina of the capillaries by an endothelial membrane. The unit columns are radially disposed around the central adrenal vein into which the medulla pours its secretion. The cell, as an entity, is polyhedral and placed very close to its neighboring cell. They are, however, separated by connective tissue and capillaries. The columns of cells are really continua-

tions of the inner epithelial cells of the cortex. The nerve supply is very rich and consists of nonmedullated fibers.

The adrenal cortex encloses the medulla on all its aspects. It is composed of a broad mass of tissue surrounded by a connective-tissue capsule. Each individual cell is filled with glistening granules, mostly doubly refractive and of lipoid character. The epithelium is composed of three zones of cells—the outer, the middle, and the inner, the middle set being the largest. This epithelium is in close contact to the several blood vessels. The cortical nerve supply is not as rich as that of the medulla. The gland is supplied with lymphatics which follow the course of the blood vessels.

The nerves are supplied by plexuses in the capsule, which in turn are connected with sympathetic ganglia cells. The main plexuses are the renal and solar.

The arteries are the suprarenal, or adrenal, from the aorta; the renal and the phrenic. The veins on the right join the vena cava; on the left, they join the renal vein.

Besides the main glands, there are several other subsidiary groups of cells in the body which are worthy of attention.

The carotid gland, about the size of a grain of rice, lies at the bifurcation of the carotid arteries. This division takes place at the upper border of the thyroid cartilage.

The tympanic glands are small groups of chromaffin tissue situated in apposition to Jacobson's nerve, in the tympanic canal. Jacobson's nerve is the tympanic branch of the glossopharyngeal and enters the middle ear through an opening in the floor of the tympanum.

The organ of Zuckerkandl is situated at the bifurcation of the aorta. This forking takes place at the lower border of the fourth lumbar vertebra. It is probably the most important of this subsidiary group.

Besides these, various groups of interrenal tissues are to be found in various parts of the body. The proof that they belong to the adrenal system lies in the fact that, when on demand, i. e., after the adrenals proper become functionally inactive, these subsidiary groups hypertrophy.

One set of this tissue is found near the adrenals. Another set is found in the re-

troperitoneal space below the inferior poles of the kidney. Still another association of interrenal cells is found in relation to the reproductive organs. It occurs along the sperm duct in man and on the broad ligament in women.

That the adrenals are functionally governed is obvious. Their controlling center seems to be located in the brain.

The pituitary body sends nerve fibers upward to the tuber cinereum and to the walls of the third ventricle.* From there these fibers go to the pontobulbar region and thence to the spinal cord.

The pituitary, like the adrenals, influences general oxidation, temperature, metabolism, nutrition and blood pressure. Very often, in acromegaly (hypofunction of the pituitary), general brownish pigmentation is seen much like that in Addison's disease (hypofunction of the adrenals). These similarities certainly suggest a relationship of the pituitary to the adrenals.

These observations, together with other anatomical and physiological data and phenomena, lead us to believe that the pituitary nerve path leaves the spinal cord through the upper four or five rami, to enter from the sympathetic the great splanchnic. From there it goes to the semilunar ganglion, thence to the adrenal capsule where it supplies numerous nerve branches.

From these facts, we reach the conclusion that: The pituitary is connected with the adrenals by direct nerve paths and that the pituitary, through the adrenals, thus governs general oxidation, metabolism and nutrition.

Embryology

Now that we have reviewed something of the anatomy of the adrenals, let us superficially examine the embryology.

The cortex is formed from the wolffian duct (the mesonephric duct).

The medulla is derived from the phaeochromoblasts; one of the two groups of embryonic cells into which the primary sympathetic cells, which migrate from the central nervous system, become differentiated. Therefore, the adrenal medulla is a direct derivitent of the sympathetic system and consequently should be, and is, closely related to the sympathetic ganglia. On the other hand, the cortex is, in the last analysis, a portion of the gonad system.

Relationship of the Ductless Glands

We should briefly consider the relationship of the adrenals to the other secretory glands before entering into the body of our discussion.

If the splanchnics be stimulated, the chromaffin cells of the adrenals are excited to increased secretory activity. The adrenal secretion exerts a marked influence on the secretory activity of the thyroid and pancreas.

Now, the question arises, just what is the relationship between the different secretions? Adrenal and thyroid secretions are reciprocal substances. One gland can not be activated without some action on the other. Likewise, adrenal and thyroid secretions exert a reciprocal antagonistic action on the internal secretion of the pancreas.

Representing these phenomena mathematically, we have:

(Sa=Adrenal Secretion., Sth=Thyroid Secretion., Sp=Internal Pancreatic Secretion)
Splanchnic Stimulus—Sa

also	Sa—Sth
Therefore,	Splanchnic Stimulus—Sth
Adding	Splanchnic Stimulus—Sa \times Sth
But	Sa—1/Sp
also	Sth—1/Sp
Therefore,	Sa+Sth—2/Sp
Adding	Splanchnic Stimulus—Sa+Sth+2

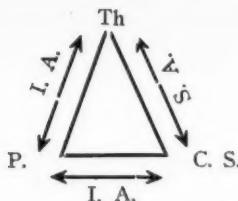
Sp

Representing these same phenomena diagrammatically:

(Th.=Thyroid Secretion., C. S.=Chromaffin System (Adrenal System)
P.=Insular Apparatus of Pancreas, S. A.=Stimulating Action., I. A.=Inhibitory Action.) (See diagram, p. 547.)

*The tuber cinereum is a gray eminence between the corpora albicantia and the optic tracts, and forms part of the floor of the third ventricle.

From the diagram, it is seen that the thyroid secretion is the excitant of the



suprarenal apparatus, and adrenalin the excitant of the thyroid. Furthermore, adrenal secretion exercises an inhibitory influence on the pancreas, while the secretion of the latter has the same effect on the adrenals.

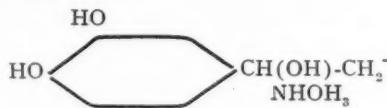
Then, if there is hypoactivity of the thyroid, there will result hyperfunction of the pancreas; likewise diminution of the function of the adrenals occurs.

Chemistry

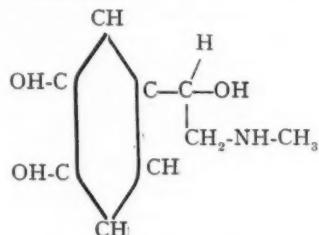
Now, the next important step we will take will be, to look into the nature and properties of suprarenal active principle. The synonyms for this substance are, epinephrine, adrenalin, adnephrin, adrin, suprarenalin, supracapsulin, and others.

When isolated, this substance is a yellowish-brown, stable, alkaline powder. It is slightly bitter and numbs points of contact on the tongue. It turns brown upon being heated to 205° C. (401° F.) It is readily soluble in most dilute acids and alkalies, slightly soluble in cold water and more soluble in hot water. The colorless aqueous solution is easily oxidized, changing from pink to red to brown.

The formula of the active principle is 3:4 Di-hydroxy-alpha-methyl-amino-methyl-phenyl-alcohol or Ortho-dioxy-phenyl-ethyl-methylamine.



This formula may be expressed graphically as follows, which will perhaps simplify it somewhat:



It has been determined that, chemically, there is a close kinship between epinephrine (formula $\text{C}_9\text{H}_{10}\text{NO}_3$) and Tyrosine (formula $\text{C}_9\text{H}_{11}\text{NO}_3$).

It also bears a near relationship to a group of substances (amines) to which the active principle of ergot belongs, as does a group occurring in putrid meat.

Due to its remarkable color reactions, the adrenal active principle is distinguishable from all other substances. It colors green with ferric chloride, and becomes pink to a carmine red when exposed to air or when treated with alkalies or oxidizing agents. The best tests for identifying this substance are based on its color reactions, namely, its green reaction to FeCl_3 and its pink reaction to iodine water.

To isolate its active principle from an extract of the gland, alcohol should first be added, which releases the by-substances. A concentrated solution of ammonium hydroxide then is added and the active principle precipitates out as a white microcrystalline powder.

Aside from the active principle, some proteins, lipoids, extractives, albumins, globulines, can be isolated.

The proteins are like the ordinary product answering that name. The albumins, globulines, and nucleoproteins are of the same order as those found elsewhere in the body. The extractives and salts are of the same order as we should expect.

The lipoids are of considerable importance. They are mostly found in the cortex. The adrenal cortical substance is one of the richest tissues in the body in respect to lipoids. The following lipoids have been isolated:—

Cholesterinpalmitate ($\text{C}_{27}\text{H}_{45}\text{O} [\text{C}_{18}\text{H}_{31}\text{O}]$).

A cholesterin ester of Carnaubic Acid ($\text{C}_{27}\text{H}_{45}\text{O} [\text{C}_{24}\text{H}_{49}\text{O}]$).

Kephalin, mono-ammonio-monophosphatid, ($\text{C}_{18}\text{H}_{30}\text{O}_3$).

Now that we have examined the anatomy, histology, embryology, and chemistry of the adrenals, we are ready to proceed with the functions proper of these interesting organs.

Physiology

Early in the last century, Brown-Séguard came to the conclusion, after much experimentation, that removal of both adrenal glands was incompatible with life. The average duration of life after complete removal of both glands was only 34 hours. Tabulating the results of total ex-

tirpation of both glands, he presented the following to his contemporaries:—

Species	Length of life after operation	Number of animals
Dog	22-75 hours	7
Dog	75-128 hours	3
Cat	15-28 hours	15
Cat	28-47 hours	2
Rabbit	8-14 hours	26
Guinea-pig	4-9 hours	20
Rat	15-19 hours	4
Mice	8-13 hours	10
Hedgehog	14 hours	1
Weasel	21 hours	1
Frog	22-45 hours	25

The effect on metabolism of the removal of both glands proved to be as follows:

1. There is no change in the destruction of albumins.

2.—The tolerance for sugar is increased and the sugar in the blood decreases. This is due to the antagonism between the adrenals and the pancreas. Therefore, it appears as if indirect regulation of the amount of sugar in the blood were a function of the adrenal active principle.

If an animal which has been subjected to epinephrectomy is made to exercise, death is hastened. That is, the toxins formed by muscular contractions are not destroyed during the absence of adrenalin in the blood. From this, we can assume that another function of the adrenals and their secretion is, to destroy the toxins formed during muscular contraction.

A brief symptomatology of suppression of the suprarenal functions are briefly: Pronounced muscular weakness, extreme nervous depression (sometimes amounting to paralysis), reduced cardiac and respiratory activity, hypothermia.

But, we know that embryologically the two parts of the adrenals are of totally different origin. From this, we have a perfect right to deduct that they have totally different functions.

Very little is known of the cortical function, though there seems to be a definite relation between them and the development of the gonads. Beside their embryological development, the cortical cells bear a remarkable resemblance to the cells of the corpus luteum. Another potent reason for our belief, that the adrenal cortex is closely related to the sexual system, is the fact that, in sexual precocity, it is found that the cortex is very much hypertrophied. The cortex also hypertrophies during pregnancy and is maldeveloped in sexual deficiency.

That the cortical tissue possesses antitoxic properties, is certain. The following

experiment, performed many times, always yielded the same result.

Cobra venom to which an emulsion of cortical extract has been added is injected, and it has been shown that without fail the toxin is rendered inert. If the toxin is injected without the protection of the extract, death is a certain result. It has also been found that animals suffering from botulism exhibit a hypersecretion of lipid substance from the cortex. Therefore, we may safely make the following statement:

The functions of the adrenal cortex seem to be:

1.—Connected with the growth and development of the genitals (derived from the wolfian duct; histological similarities);

2.—Collection of cells having an internal secretion (lipoids) with marked antitoxic properties. (Two experiments listed above);

3.—Slightly connected with the secretion of the medulla.

The internal secretion of the cortex would seem to have its origin in the lipoids which so richly adorn the individual cells of the cortex.

That there is an internal secretion of the adrenal gland, has been denied. The following experiments, however, will, I believe, prove beyond a doubt the existence, not only of a secretion, but of an internal secretion which is functionally active.

1.—The suprarenes have the typical gland formation (columnar cells with intervening blood spaces).

2.—The blood of the adrenal vein and that of the vena cava above the adrenal vein, when injected into a living animal, causes a marked rise in the blood pressure. This proves that it contains a functionally active principle derived from the adrenal glands.

The functions of the medulla will be discussed at greater length further on. It will suffice to say at this point that, among its functions, is that of preservation of the tonus of those organs innervated by the sympathetic system. It also, indirectly, regulates the sugar content of the blood, as has already been pointed out. It increases the excitability of the striated muscular fibers; relaxing the stomach and intestines, which causes contraction of the pylorus and ilio-cecal valve, also causing the internal sphincter of the anus to contract.

Summing up the last few statements we could say that:

1.—Removal or rendering inert the adrenals arrests the supply of a secretion which these organs pour into the adrenal veins.

2.—The adrenal secretion gives rise to physiological phenomena which are not awakened by extracts of other organs.

(To be continued.)

What Others are Doing

ERYSIPelas TREATED WITH BRIL- LIANT GREEN

Edgeworth reports results from brilliant green (*Brit. Med. Jour.*, Nov. 20, '20) in the treatment of erysipelas. This germicide belongs chemically to the family of flavines, or dyes derived from a coal tar base (acridine).

Previously, he had tried a solution of magnesium sulphate, glycerin, ichthyl and picric acid in methylated spirit, and iodine in rectified. The total number of cases treated was 40. Picric acid, iodine and brilliant green were carefully compared in cases of about equal virulence. From the two first agents, the results were disappointing. Brilliant green gave happier results. Cases treated with the latter were the only ones in which dramatic disappearance of both rash and fever (as early as the second or third day of the disease) was observed. In a dozen cases at least, the attack subsided in about five days. In two of the series, the symptoms recurred on the tenth and twelfth day respectively. There were no deaths.

Concluding, the author recommends the agent in high terms. His method was, to paint the affected area with a 5-percent aqueous solution once a day in mild cases and twice a day in severe cases. No dressing was used, except a piece of lint to avoid staining the bed-clothes.

Acriflavine would probably serve as well or better and we hope that physicians will try it out and report results. Its popularizer in England, Browning, experimented with brilliant green along with several other flavines, in the treatment of wound infections, but decided that acriflavine was the best germicide of them all.

GIVING QUININE INTRAVENOUSLY

Intravenous injection of quinine in concentrated solution (10 gr. in 20 mils (Cc.) usually produces a fall in blood pressure and may be followed by a disappearance of

the pulse for a few seconds. Intravenous injection of quinine in dilute solution (10 gr. in 200 mils (Cc.) may be followed by a fall in blood pressure, but this fall is neither so sudden nor so great as in the case of concentrated solutions. In many cases, there is no lowering of blood pressure. The more slowly the injection is given, the less is the likelihood of a blood pressure reduction.

The diminished blood pressure may persist for twelve hours or more after the injection. Intravenous injections of quinine should always be given in very dilute form (in 300), and at the rate not exceeding 10 mils in the minute. It should never be lightly undertaken. With the use of concentrated solutions, it may be followed by transient muscular twitchings and quickness of breathing. An injection of quinine should be given only while making frequent and careful blood pressure observations during the operation. As, in malarial fever, especially of the pernicious type, blood pressure is sometimes very low, one should be particularly careful to inject the drug slowly and in a dilute form, guarded by administration of pituitrin or adrenalin, and application of tight bandages over the extremities.

The foregoing advice is from Brahmapuri, of the Campbell Medical School, Calcutta (*The Lancet*, Dec. 15, 1920).

THYROID DEFECTiON IN NERVOUS CASES

A very large group of cases passing as neurasthenia or nervous breakdown or nervous indigestion may be benefited, says Rogers (*Med. Record*, Oct. 16, '20) by thyroid substance along with rest. For, mostly and primarily, these conditions are the result of mental or physical fatigue.

To begin with, the patient is often inherently and to a high degree sensitive to his environs; he feels keenly; is deeply impressed; is perhaps mildly neurotic or subject to nervous instability. Such a person

does not bear lightly the stress and cares imposed on one in the cities. It is a case of too much being imposed on an organism too frail to carry it off well, as a dull phlegmatic person is able to do complacently.

The history is usually that of overwork or nervous strain or worry at some period in life, followed by fatigue and some or all of the following symptoms: palpitation on the least exertion or excitement, tremulousness with slight effort, irregular or irritable pulse rate, gaseous indigestion, pallor, an undernourished condition of the body.

At first, coincident with these symptoms, we have a hypothyroidism. Later, if the conditions are not changed which contribute thereto, or if proper treatment is postponed, the glandular disorder changes to one of hyperthyroidism with more or less enlargement of the gland, and perhaps a feeling of regional pain or constriction.

The earlier symptoms call for thyroid feeding over a long period, with or without pituitary, and rest. Iodine is a good remedy; so, too, is pancreatin, with bile or bile salts, when indigestion symptoms are prominent.

BILE SALTS FOR MARASMIC CHILDREN

Kerby (*Lancet*, Feb. 5, 1921) reports very good results from the bile salts, sodium glycocholate and sodium taurocholate, the two combined, in the treatment of marasmus affecting infants. The average dose administered by him in his series of cases was 1/3 grain of the mixed salts, this dose being the suitable one for an infant three months old. The diet consisted of pasteurized cow's milk properly diluted for each patient.

Two of the cases were strikingly benefited, whereas for ten months or so, no success was had with other treatment previously used to stay the physical decline of the infants in hand; despite every effort they went a downward course, until the bile salts were tried. From then on, there was a gradual increase in the weight of these two, as the scales showed. And there was a general improvement, apart from the weight, which impressed all observers. The infants, apathetic and feeble, and to all appearances moribund, responded

from the very first, till they were vigorous and thriving like normal babies.

"It must be emphasized," says Kerby, "that the actual gain was greater and more complex than a mere increase in weight."

The doctor does not venture to account for the favorable effects of the bile salts in these cases, only saying that they may facilitate fat assimilation.

HOW AVOID A MASTOID OPERATION?

In view of its seriousness and the very high mortality attaching to operations on the mastoid, it is a matter of concern to the average general practitioner to treat properly the acute ear disease that precedes it or is likely to precede it in so many of the cases. Any fairly sure means of heading off a mastoiditis, ere it reached the dangerous state, is therefore noteworthy.

To be sure, it is quite common to terminate an acute otitis by a simple paracentesis. By cutting a bulging drumhead, the inflammation and earache frequently subside after a day or two. But, this is incomplete treatment, an instance of doing things by halves. The inflammation may not subside. In cases showing much inflammatory thickening of the tympanic membrane and mucosa, the result of a mere drumhead incision may be a nipple perforation which is of little or no value for drainage.

In such cases, drainage must be established, in one direction if not in another, externally if not through the Eustachian tube into the nasopharynx as normally. A nipple perforation fails adequately to provide it as a rule. Hence, the observation that it forecasts a fatality.

Leland (*Boston Med. & Surg. Jour.*, March 10, 1921) makes it a practice to drain acute inflammatory conditions of the middle ear (involving the mastoid) through incisions made first through the posterior segment of the drumhead, curving upward and backward on the bony wall of the canal, cutting deep down to the bone; three other incisions through Shrapnell's membrane, beginning at the posterior fold, upward and out on the canal; one at the anterior fold; and another directly above the neck of the hammer. To avoid coagulation of blood and interference with drainage, Wright's solution is poured in warm at once, and, with a pledget of cotton in

forceps or with applicator, is pumped into the depth of the canal. Later, a light gauze wick (saturated) is introduced and a dry pad laid on at the orifice. Next morning, the wick is changed and warm solution again poured in.

Wright's solution consists of sodium citrate (1%) and sodium chloride (4%).

BENZYL BENZOATE FOR AFTER-PAINS

As time passes, the utility range of benzyl benzoate is widening. Quite recently, Macht himself reported on his experience with it in the treatment of convulsions in small children, since which others have confirmed its value in such conditions.

Now we see (*Boston Med. & Surg. Jour.*, Feb. 17, 1921) that Chisholm has found it useful for the relief of after-pains. He reports a case in detail. The woman is twenty-four years old. She is the mother of three children living and of three dead, and has had one miscarriage. January last, terminating her sixth pregnancy, there were born twin girls. The placenta (one) was discharged a few minutes after the second infant came. There were two membranes, one of which formed a caul about the first child.

The mother suffered pains of average severity. She was given 5 drops of elixir benzyl benzoate every four hours. This dose later was increased to 7 drops. As gratefully admitted, decided relief was had almost from the first.

THE BEST ARSENIC PREPARATION

Having used it in place of Fowler's Solution for about ten years, Laphorn Smith (*Pract.*, March, 1921), has loud words of praise for sodium cacodylate. He finds it most valuable in the treatment of anemia and skin cases. But its salutary effects extend to a number of other conditions. Indeed, he is convinced that the cacodylate is the best form of arsenic to give whenever arsenic is indicated.

As a quickly acting tonic for women, whose duties subject them to great physical strain, a hypodermic injection of $\frac{3}{4}$ grains of the cacodylate has given great satisfaction in the author's hands. Quite recently, he has been using it as a general

tonic for patients of both sexes, who without exception declared that they felt the benefit of it almost immediately.

In malaria, very good results are had from it, notably in the cachectic cases.

THE LATEST IN REFERENCE TO CANCER

As to cause, we are still in a quandary. Yet, the latest opinion favors the parasitic origin; so, Laphorn Smith, for one (*Pract.*, March, 1921). That the parasite has not been found or seen under a microscope, is in his opinion no reason for denying its entity. Attention is called to the fact that syphilis, although the spirochete was isolated only a few years ago, has none the less been recognized as a contagious disease of extreme virulence, for long.

Cancer departs itself like a parasitic disease. There is on record an instance of a physician voluntarily swallowing cancerous material from the lesion of a patient, in order to prove that the disease was not contagious; however, he promptly developed it himself and died. Gueillot has collected 23 cases of cancer affecting the penis, in men whose wives had uterine cancer. The frequency of the disease by districts is significant. There are districts in France showing many victims, and certain houses or blocks of houses in which death from this source occurs with startling frequency.

The theory is that the disease develops upon the least resistant site; cicatricial tissue, such as that left by gastric ulcer, is prone to attack because it is of low vitality and poorly provided with blood-vessels.

The isolation of inoperable cases, with measures taken to protect other members of the family, is therefore to be recommended. For the patients themselves, methyl arsenate is mentioned as a remedy, since it kills the treponosome of sleep-sickness as well as the spirochete of syphilis. Possibly, for the same reason, acriflavine may prove valuable.

Much benefit has resulted from the use of cacodylate of sodium in the hands of the author. He gives it hypodermically. As it is cumulative, one may give 5 cg. every day for two weeks, say, 70 cg. in all; stopping for a week, and then resuming for another fortnight. The drug can do no harm in any case and, as stated,

is likely to do a world of good in dire circumstances.

The novel view of Robinson (*Med. Record*, July 24, 1920) should be mentioned in this connection. He looks upon cancer as being caused by an overplus of sodium chloride, or common salt, in the organism, the pernicious effect of which he thinks to offset by potassium nitrate in hypotonic solution.

CHOOSING THE LOCAL ANESTHETIC

Because it is efficient and may be used almost ad libitum, procaine must be accepted as the local anesthetic of choice. So affirms Maxeiner (*Minn. Medicine*, April 25, 1921).

Although toxic, this agent is only fractionally as toxic as cocaine. In any case, toxicity depends upon the amount of the drug directly absorbed into the circulation. It is therefore desirable to control absorption up to a certain limit. This may be accomplished by the addition of adrenalin or the use of a tourniquet, preferably the former. Besides, adrenalin has the distinct advantage of rendering the operative field bloodless or comparatively so.

The combination of procaine and adrenalin in suitable proportions has been worked out commercially by chemists, who supply both tablets and ampule solutions for the surgeon's use.

For infiltration, paraneurial and caudal anesthesia, 0.5 to 0.7% procaine in Ringer's solution (with three to five minimis of adrenalin to the ounce) has proved most satisfactory in the experience of the author. For intraneurial injections, he prefers a 1 to 2% procaine solution in Ringer's solution, with the same proportion of adrenalin.

As a preliminary to amputations of the legs or arms, anesthesia with procaine is preferable to general anesthesia, especially when the surgeon is obliged to give his own anesthetic, in such unfavorable places as a farmhouse, say. The limb may be prepared for the knife in from eight to ten minutes, with a good technic, following which the surgeon may devote all his attention to the operation. First, a subdermal infiltration is made completely around the limb and, afterward, through this anesthetized ring, the needle is introduced at right angles forming a transverse plane

of infiltration completely through the extremity, depositing most of the solution in the trunks. The procedure is effectual and safe.

SURGERY OF THE HEAD

Many operations involving face and head can be done satisfactorily under local anesthesia. As Labat points out (*Minn. Med.*, April 25, 1921), the regional anatomy is peculiarly suited to the use of the syringe, partly from the fact that its sensory nerve supply is so very simple. On the other hand, general anesthesia for operations of this sort is in several respects disadvantageous both to the patient and the operator.

Freshly made procaine-adrenalin solutions are the best for routine use. Labat makes his own solutions by dissolving procaine powder in sterile normal saline solution (0.9 Gm. of sodium chloride for each 100 mils of doubly distilled water) and adding to every ounce of such solution five drops of adrenalin, 1:1000, immediately before use, irrespective of the procaine strength. To obtain a sterile solution, in the event that the procaine powder is not already sterile, make a half-normal saline solution (0.45 Gm. of sodium chloride for each 100 mils of distilled water), boil it gently for five minutes, throw in the powder and boil for another couple of minutes, and, after bringing the solution down to the temperature of the room, or just before using, add the adrenalin. Procaine solutions do not stand long or repeated boiling well. Hence, it is best to make them up as wanted for each case.

Ready prepared solutions of the most usable strengths are now to be had commercially in glass ampules. While their cost is somewhat higher, such solutions save the surgeon much trouble. They are handy, sterile and precise.

For operations on the skull, a 1-percent solution is strong enough to give a rapid and lasting anesthesia, without causing too extensive edema. For operations on the face, it is best, thinks Labat, to use small doses of a 1-percent solution, so as to avoid distortion of the anatomic features encompassed in the operative field. For blocking the superior and inferior maxillary, the inferior dental and lingual nerves, from 2 to 3 mils of a 2-percent solution is injected, and for the infraorbital or mental nerves, 2 mils of the same strength.

Let's Talk it Over

Syphilis Insontium

Sins of Omission on the Part of Physicians

WITH no other thought in my mind than to aid those less fortunate than myself, I am writing this article, based on my own experience with one of the venereal diseases, syphilis, its effects upon my body and mind; also, the cure that was used successfully and the partial restoration of my health.

I will not endeavor to polish this article on syphilis, but will treat the subject with the utmost candor, dwelling upon a little narration of my youth and its early promises, as a means of emphasizing the vital importance of discovering any one of the venereal diseases before they become unconquerable.

The average person who contracts a venereal disease has not the means to be treated properly by a private physician and, dreading the publicity of applying at a public clinic, where the majority of the attendants do not treat them any too kindly, they usually look around and find some "quack" doctor who promises to cure them for a small sum. I personally know of one doctor who guarantees to cure patients for thirty dollars. The party who told me of this particular doctor, in fact has been under treatment several times; hence, it is plain to be seen that he never brings about the desired permanent results.

The November issue of "Physical Culture" contains an extensive article, written by Mr. McFadden, on Venereal diseases, weighing heavily on the parents of those who have failed in their parental duties to warn their children of such dangers. Thousands of people never hear of these diseases. They lead clean, upright lives and

do not come in contact with those dangers.

I had been one of the millions, patronizing "quack" doctors who prescribed medicines, both externally and internally; doctors who had starved me, dieted me and then pronounced my case hopeless; a highly developed case of bronchial trouble and a year or more to live.

Fate led me to an honest and intelligent doctor who refused to prescribe any medicine after learning the history of my case, until I had a Wassermann test made and a specimen of my sputum examined for tubercle bacilli. Then I learned that I was suffering from syphilis. In my case, there were no cankers, no rash, no outward signs whatsoever until almost four years after I had contracted the disease. Inasmuch as I had always led a decent, respectable life, both before and after my husband's death, there could have been no other way of my contracting the disease than through him. Upon learning that I had no outward signs of this disease, physicians would assure me that there was no cause for alarm. Since I have learned myself so much about the peculiar ways of this disease, I don't believe that any one of the physicians consulted, knew enough to advise a Wassermann test, which is such a necessary procedure.

I don't really consider myself stupid, but I had never heard of this method of discovering disease through a blood test and thought it was just a repetition of the various examinations I had undergone during the past years. When the doctor explained it to me, I immediately had a test made. It saved my life! When a popular pamphlet on venereal diseases is published, it is always so polished that the reader usually does not learn any more than he did before.

¹This article, submitted by a laywoman, as a part of the discussion on sins of omission as regards the treatment of venereal diseases, is published because of the lesson it contains. It is well for us, for once, to get the viewpoint of the other side.—Ed.

I say that it is a mistake not to cite the absolute, plain facts.

I know of a case where a father died seven years ago, leaving a mother to support four children. She has just learned that she has syphilis. Does anybody realize what that means to that woman? Can she afford to go to a private physician and pay the sum asked, and support her family, too? Does the public realize that this woman must have one day off for this treatment in her weakened state? She is just an ordinary worker, and has repeatedly lost positions through her inability to work the day after having had a treatment. Probably, if she had been advised by some reliable physician, years ago, her case would not have been difficult to cure. She is now undergoing treatment in a clinic. I heard the doctors tell her that it would take two years to cure her. That is certainly too great a punishment for any innocent woman.

Born on a farm near a thriving little town in a Western state, I spent my childhood pursuing my own inclinations. My parents were of German descent, farmers, comfortably situated but, never having had the opportunity to mingle with the world, they were not cognizant of the dangers that confronted modern children. My father, having had no opportunity to pursue his studies, had provided his children with every means of obtaining a good education. Our home was a small library in itself.

The year I entered high school, I was thirteen, and well developed physically. I played center on a basket ball team. Possessing a good soprano voice, I was frequently called upon to sing at the entertainments which our church and school gave. My work throughout my highschool course was highly commented upon. Being partial to history and literature, I was successful in having several articles appear in our local newspaper. My father took the greatest pride in acquainting everybody with his daughter's literary talent.

Against the wishes of my mother, who was naturally inclined to be somewhat penurious, I entered one of the best universities in this country, the fall after graduation from high school. I joined a glee club making a public appearance once every week.

The death, from accident, of my father,

during the holidays, brought me back home for a week. My tuition was paid for an entire year, but I was given to understand that I need not make preparation to return the next year.

Returning to college to complete my first year's work, I met a man several years my senior and well versed in the ways of the world. Our friendship terminated in our marriage, the following July. An estrangement arose between my family and myself due to my marriage. With no thought in my mind as to his past record, and no one to warn me, I married the man, looking only at his apparent prosperous appearance. Years later, I read the following paragraph which I am going to quote for the benefit of other girls who may be aided by reading it:

"Every girl should be taught that it is of vastly greater importance for her to know the sexual and physical record of her suitor than his bank account, and her brother or father should consider it his sacred duty to investigate the moral character and reputation of the young man on whom his sister's or daughter's happiness depends."

As I had no one to do this for me, I unknowingly placed my healthy body in contact with a syphilitic man and spent the next four years in a vain effort to regain my health.

My husband was an automobile salesman with headquarters in Chicago. Although he earned a good salary, he was extravagant and I was inexperienced; consequently it did not take long to reduce our finances. Possessing a good soprano voice, I obtained a position in a fashionable church singing in the choir.

Strange to say, in six months' time my voice was failing. My throat began to pain me. I had been practicing continually and thought that perhaps I had strained my voice. Then a hoarseness developed; finally, one Sunday morning I arose with a temperature and headache. My tonsils were swollen and covered with pus. I consulted a specialist. There was nothing to do but to have my tonsils removed. I submitted to this operation. I never regained my voice.

Some time later, my husband's health began to fail. He lost weight, his teeth bothered him; his hair became thin and turned gray and he got so he didn't care

whether he worked or not. Sometimes, as he lay beside me at night, his body was like a furnace. I noticed that his back was covered with pimples. His evasive answers on the subject did not arouse my suspicion in the least. Later, when a doctor called, he requested me to leave the room. I forgot the incident.

My baby was born in June of the year following my marriage. About this time, my husband developed a severe cold. He was unable to leave his bed. Rent was due and we had to live. I took a chance in applying to my mother. I received no reply.

I knew nothing practical. My landlady was a waitress in a restaurant and she suggested that I try the work. I became a waitress and followed the work for several years.

My husband's violent coughing aroused comment. All indications pointed to tuberculosis. Going to the County Hospital, I stated my case. They soon discovered that he had tuberculosis and lost no time in placing him in an open-air sanatorium.

—
This is eight years ago, but I am positive that they did not make the Wassermann test. At least, I was not advised by the authorities of any trace of venereal disease. He was treated for tuberculosis developed through syphilis, of which he died one year later. However, he soon tired of the cure they used and came home. I refused to live with him and, after writing to his mother, then living in a Southern state, I received a letter enclosing a ticket for his return home.

To add to my misery, my baby developed tuberculosis and was admitted to the same sanatorium where his father had previously been. Almost a year later, I received word of my husband's death at his mother's home. Having a small insurance policy on his life, and needing a death certificate, I immediately wrote the authorities in the city where he died. I received a certificate in return, stating that he had died of tuberculosis and contributory syphilis.

Being young and apparently in the best of health, with the exception of a little hoarseness, I congratulated myself on escaping two such terrible diseases. I was not cognizant of the course that this disease sometimes takes. I was under the impression that one must cough violently and constantly to be infected with tuberculosis

and have outward indications to be infected with any venereal disease.

Anxiety over the results of the treatment they used on my baby caused my nerves to give way. I then began to lose weight. I was irritable; I could not eat. Upon the advice of friends, I took patent medicines; but nothing seemed to help me. Then I consulted a physician, thinking I had possibly developed one of the two diseases. I took the certificate along with me. He examined me thoroughly for symptoms of both diseases heretofore mentioned and assured me there was no cause for alarm. In those days, when one consulted a reliable physician, the charge was ten dollars for an examination. So, you usually abided by the doctor's decision.

The baby was discharged from the sanatorium, just fourteen months after entering the institution. He has never shown any signs of tuberculosis since.

During the next four years there was a general decline in my entire body, though not noticeable in any one place. But aches and pains here and there; a continual hoarseness, bordering at times on strangulation. This, I thought was due to a small goiter I had on the left side of my neck. My hair came out and began turning gray; I became sullen, mean, overbearing, hating everyone; I lost interest in the world. People commented on it. I went from one job to another, utterly unfit for work, keeping myself "broke" going to doctors and buying patent medicines.

—
In the spring of the fourth year, after I was married, I developed what I thought was a large boil on my left cheek. A general sickness over the entire body rendered me unfit for work. A lady who roomed in the same house where I did, had been to Hot Springs, Arkansas, for the baths. Of course, she was enthusiastic over the results she had obtained for her rheumatism and advised me to take a course of baths. This determined my trip South.

Not having very much money when I arrived, I inquired the cheapest way to take a course of the baths. I was informed that the Government owned and operated a bath house, free of charge. A kindly gentleman in charge inquired my trouble. I described my case. He noticed my hoarseness and inquired if I had ever had any venereal disease, as that sometimes affected the

throat. I assured him I had not, and he accepted my statement.

Surprising as it may seem, this man, at the head of an institution that handled thousands of cases a year, forgot the most important thing he could have told me,—“Young lady, have a blood test made!”

Coming out of the baths too soon, I contracted a severe cold and, on going to a physician connected with the bath house, I was advised to discontinue the baths. What I needed was a trip West, as I had a bronchial affection.

Returning to Chicago, I was forced to go to work. I was fortunate in getting a good position and tried to save enough money to go West. In a year's time, I had not been able to save much money, due to sickness and doctors' bills. I got to a point where I could hardly walk, was extremely nervous; I could not lie still, had the most peculiar sensation in my legs, could not climb even one flight of stairs; everything I ate made me sick; but, at night time, I underwent the most of my misery. Something seemed to be crawling over me; then, worst of all, a lapse of memory overtook me; I made mistakes in everything I undertook. It seemed to me that I had forgotten everything that I had learned. I began seeing things double. I would run into people on the street, in my efforts to go ahead; I seemed to be going backwards; my ears had a terrible thumping, thumping all of the time, and my head, how it hurt me! Tears would actually come into my eyes, due to those terrible pains in my head. The only relief I could get was aspirin and I sometimes took the contents of a full box in one day. Then, of a sudden, one day, something at the base of my brain snapped and I fell to the floor. I then consulted another doctor and he refused to prescribe for me until I had the necessary tuberculosis and Wassermann tests made. The return slips showed a highly infected syphilitic state.

All of my life, I have adhered to the theory that no one is justified in committing suicide. I had no money and was too ill to continue working any longer. I inquired into this doctor's terms; fifty dollars for each injection of salvarsan, and two dollars for the mercury. Knowing it to be the law for doctors to register venereal-disease patients and compulsory for patients to be treated and cured by some doctor, I did not know what to do. I

realized that, if I were not treated somewhere, he would report me to the authorities. I did not have the money to be treated by him, and was afraid to go to a public place, lest someone should learn of the nature of my case, and I would lose my job.

Now, I do not want any doctor to think that I mean by my reference to the price of the treatments that they are not worth the money. They are worth it, and a great deal more; but, there are thousands and thousands of people, like myself, who can not afford to pay those terms, especially when the case is of so many years' standing.

A thought came to me. I was insured in the Prudential Life Insurance Company for one thousand dollars. On my way home, I studied it all out, just what course I would take. In case of suicide, the policy was void. I would make it accidental. There would be enough left out of the thousand dollars after my burial for the grandmother to get the baby and take him to her home in the South.

I had gotten to the place where I had not the courage to go another step. I went back over my life, leading up to that time, reasoning that it was the one and only way.

Just as the fumes of the gas began to spread and I had taken my first deep breath, like a flash of lightning, the thought of the baby came to me. What, if he had been infected and would have to go on for years suffering as I had? The thought saved me!

Finally, I learned of a clinic that treated venereal disease. Going there, I found it to be a terrible place. A doctor took me aside and offered to treat me more “reasonably” than the other one had. I accepted his offer.

I began a course of treatments. The first injection of salvarsan put me in bed for three days. Upon receiving the second injection, I felt a general improvement throughout the body. The headaches began to come less frequently and I could walk without running into everyone.

After a time, my teeth became affected and I suffered intense pain. A large boil formed on my chin. I had to have one of my front teeth extracted to let the pus out.

When I returned to work, three weeks later, three large boils formed on my right arm just above the elbow. Not being able

to quit work, I suffered terribly. The consequence was, that I lost my job.

Going to New York City, I obtained treatment in one of the best clinics in that city. The last Wassermann test was negative, but that does not exclude the possibility of syphilis. I expect to be under care for a long time yet; still, I have improved wonderfully.

A Laywoman.

PUBLIC HEALTH INSTITUTE POSTPONED

The proposed Public Health institute which the Service contemplated holding in Washington, D. C., during the fall of 1921, has been indefinitely postponed. This action has been decided upon after several conferences between officers of the Service and officers of the American Public Health Association.

The Fiftieth Annual Meeting of the American Public Health Association is to be held in New York City, November 14-18, 1921. Several other activities are planned by the Association in connection with their semi-centennial meeting in November, 1921, and it was at the request of the American Public Health Association that the Service institute for next fall was abandoned.

The Service hopes that it will be possible to arrange to hold a similar institute in Washington during the spring or fall of 1922.

By direction of the Surgeon General.
C. C. PIERCE,
Assistant Surgeon General.

INSTRUCTION OF VENEREAL-DISEASE PATIENTS

I have read carefully the article written by Louis Savitts (June issue, p. 396) and I can appreciate his lack of information because, as stated in my first letter (March issue, p. 193), I am only a layman and can not outline carefully enough the treatment to which I was subjected.

It has only been during the last one or two years that this drive on venereal diseases has come to a head. Whenever you go in men's lavatories you will find posted, by the Government, cards outlining the effects of gonorrhea and syphilis and the manner how they are contracted; but never once have I seen a poster that told how to avoid contracting them. In my feeble opinion, the Government is wasting time and good money in this sort of propaganda. This is simply a case of locking the barn door after the horse is stolen.

The matter of furnishing broadcast pre-

cise information relative to a preventive instead of a cure was broached in one of the issues of your magazine but you didn't push it hard enough. The article I read was only a short one which just touched upon the possibilities.

My case has been running for about three years and the indifference displayed by the eight or ten doctors that I consulted is appalling; yet, I pay cash. Most fellows would rather take a chance of contracting one of these diseases than to ask point blank for information. This may be false pride and, undoubtedly is, but, it makes no difference what you call it, it's there and all the argument in the world to the contrary won't remove it.

I will call upon this Dr. Savitts, the next time I am in Chicago, if you will publish his address. I have not yet given up the idea that I can be cured without removing the tubes.

"A READER."

[Doctor Savitts made no attempt to give any information on venereal prophylaxis, such as "A Reader" desires. That was not the purpose of Doctor Savitt's article, nor would CLINICAL MEDICINE be a proper medium through which such information could be submitted to the public.

"A Reader" must realize that this subject hardly is one that can be dilated upon in books or pamphlets. As a matter of fact, certain Government agencies with Comstockian ideas would very promptly brand such publications as "Obscene, lascivious, indecent," etc. Supposing one of the medical services of the Government were to issue a circular containing complete instructions, such as "A Reader" requests, would it not be a spectacle for gods and men to have that same Government agency indicted, tried and fined for obscenity, indecency, etc., by another branch of the Government? Not but what such things might happen.

The information that "A Reader" desires, he can secure only through his physician, and his idea that "most fellows would rather take a chance of contracting one of these diseases than ask point blank for information" is not well taken. One's physician is the proper teacher in matters of prophylaxis, venereal as well as relating to other sickness.

The question of "morals" enters into the matter only secondarily. We realize fully

that morals, custom, public opinion, have a difficult time when they buck up against strong natural impulses. The part of wisdom is, to guide rather than to attempt to subdue them. The guiding, of course, must be in the right direction.

If "A Reader" ever comes to Chicago and will call upon us, we shall be glad to give him Doctor Savitt's address. We cannot very well publish it in this place.—
Ed.]

PRIVILEGED COMMUNICATIONS

In an editorial in CLINICAL MEDICINE for June, 1921, on page 356, I note a criticism of Dr. Hugh L. Russel, of Buffalo, N. Y., for testifying in the famous Stillman case in New York. From the tenor of this article, it would appear that there is serious misapprehension as to the duties and obligations of physicians with regard to testifying in court.

No physician, be he ever so prominent or "ethical," is above the law. I have known a number who thought they were, but they were seriously and grievously mistaken. When a physician is under oath on the witness stand, in a court of record, and the judge tells him to answer the question or go to jail for contempt until he has purged himself of the contempt by answering, he generally answers; and is not to blame for it either. He simply cannot help himself.

Eminent counsel conducted both sides of the Stillman case. It goes without saying that no incompetent testimony was offered without objection from the other side, and, if the testimony of Dr. Russel had been incompetent, it would never have been heard.

The law of privileged communications, shorn of all extraneous legal verbiage, is about as follows:

The following persons shall be incompetent to testify:

1. Persons of unsound mind at the time they are called to testify.
2. Children under the age of five years, or of such tender age that they do not comprehend the nature of an oath and the subject matter they are called upon to testify about.
3. Husband and wife concerning private matters within the marriage.
4. Physicians and surgeons concerning statements and the results of examinations

which were necessary in order to prescribe for and treat the patient.

5. Ministers and priests of any religious creed or denomination concerning any confession or admission made to them in their professional capacity in administering the discipline of their creed or organization.

6. Attorneys at law concerning any statement or confession made by a client in the line of their professional employment.

In the case of the physician, the privilege of secrecy is in the patient and not in the physician. It is always within the power of the patient, by proper objection of counsel, to exclude all incompetent testimony. This privilege the patient can waive. In the Stillman case, the statement of the wife to a physician, that she was pregnant, is not to be construed against her, it does not import moral turpitude, but is rather to be commended as the statement of a condition meeting the approval of society and the law. The law presumes the paternity of a child born of a wife. Only she and her husband can be heard to deny the paternity of the husband. A statement of alien paternity was not necessary for the physician, to prescribe for or to treat the patient. To him, the statement was not privileged in any sense.

If the statement had been made to a minister or priest, in the nature of a confession of sin or wrong, it would have been clearly privileged under the law and the minister or priest would have been incompetent to testify.

The fact that the physician was an Osteopath, or that Osteopaths have a different code of ethics is entirely beside the question. If the testimony was received in the case, it was competent. The physician was called, put under oath and interrogated and had no discretion but to answer or go to jail until he did answer.

A physician, with all his professional pride, must respond in person to a subpoena, just like all other ordinary citizens. If he does not respond in person, at the appointed time and place, the court will order an attachment of his person, and the most ordinary deputy constable or deputy sheriff will come to his office and take his body forthwith to the courtroom where he may purge himself of the contempt by paying the ordinary fine, after which he may be put upon the witness stand and compelled to testify, his boasted code of ethics

and Hippocratic oath to the contrary notwithstanding.

E. M. PERDUE,

Kansas City, Mo.

THE AMERICAN ELECTROTHERAPEUTIC ASSOCIATION

The American Electrotherapeutic Association will hold its Annual Thirty-first Meeting in the Washington Hotel, Washington, D. C., September 7th to 19th. Dr. Byron S. Price is president. Dr. A. Bern Hirsh, secretary.

This is the oldest electrotherapeutic association in the world. Its members have made many valuable contributions to science.

This year, the meeting, in addition to its scientific program, will give two hours daily to the practical demonstration of how to use equipment to secure certain definite therapeutic results. These demonstrations will be given by men of national and international reputation as electrotherapeutists.

Among those who will give demonstrations are, Dr. Frederick de Kraft, general diathermy; Dr. Edward C. Titus, cerebral diathermy and the use of vacuum tubes with static current; Dr. Frank B. Granger, galvanic and sinusoidal currents; Dr. Wm. Benham Snow, static currents in the treatment of arthritis; Dr. Mary Arnold Snow, mechanotherapy in the treatment of abnormal blood pressure; Dr. Howard T. Plank, actinic rays in the treatment of malignancy; Dr. Frederick H. Morse, the alternating current.

Manufacturers are cooperating with the Washington Committee to make this the best meeting ever. They will have on hand large exhibits from which the apparatus for demonstration will be drawn.

For scientific program address Dr. A. Bern Hirsh, 71 W. 94th St., New York City.

For details as to hotel accommodation, exhibits, entertainments for the ladies, address Dr. Elnora C. Folkmar, who is Chairman of the Washington Committee.

A BUST OF MORTON FOR THE HALL OF FAME

Send Your Contribution Now

In the election of Dr. Wm. T. G. Morton to the Hall of Fame, the allied professions of medicine and dentistry have been singularly honored. By their overwhelming vote, the electors have also evidenced the appreciation of the public at large for the beneficence of anesthesia.

Recently, at the Annual Dinner of the American Anesthetists, in Boston, during A. M. A. week, Dr. S. Adolphus Knopf, the elector most responsible for the honoring

of Morton, said that it would be a proud privilege for the Associated Anesthetists to place a bronze bust of Morton in the niche assigned him by the electors. This is to be done at the celebration of the Diamond Jubilee Anniversary of Morton's Demonstration of Ether Anesthesia.

The Associated Anesthetists, as well as other prominent leaders of the allied professions, are, therefore, urging all those interested to make a substantial contribution for this purpose. Send your check or money order at once to

F. H. McMECHAN, M. D., Sec'y-Treas.,
Associated Anesthetists,
Lake Shore Road,
Avon Lake, Ohio.

WISCONSIN HOME-COMING

The State Medical Society of Wisconsin will celebrate its seventy-fifth birthday by holding a "Home-Coming" meeting in Milwaukee, September 7, 8 and 9, 1921. All former Wisconsin men, whether they have practiced there or left Wisconsin to study medicine, practicing elsewhere after graduating, are invited to this home-coming.

The officers of the society are anxious to secure at this time for mailing purposes the names of all former Wisconsin men. You will confer a favor by sending names and addresses to Dr. Rock Sleysser, Secretary, Wauwatosa, Wisconsin.

THAT VACATION TRIP—AND OTHER THINGS

Something has been said, heretofore, about vacation trips, and the season for such is approaching again. Those living within a reasonable radius of "the city," who desire to make a southern trip, would do well to think of this section via the Jackson Highway out of Nashville, Tenn., and to the Tri-Cities (Florence, Sheffield and Tuscumbia) with their much talked of Muscle Shoals on the Tennessee river in Alabama; thence to the southwest through Mississippi, to New Orleans, or to the southeast by way of Birmingham and to Florida, with return route through Georgia and on to Chattanooga, Tenn., and back to Nashville.

Nothing of the ultra grandeur type is claimed for this section; but, there is much that is good to see. There are mountains and valleys, great tracts of virgin forests, mountains of iron and coal, coal mines and iron mines, cotton fields and cotton mills. This would make a right good camping-out

trip, and if a bunch of you could get together for it and if you could conscript Dr. W. F. von Zelinski of Chicago to supervise the team work, I see no reason why it should not be a great trip. I saw a bit of Von Zelinski on the Border and, when I last heard of him, he was over in Georgia complaining of the scarcity and high cost of good spirits (non-alcoholic). [Dr. von Zelinski is in service, and not available.—Ed.]

In a territory adjacent here, and containing 400 or 500 square miles, up to 1919 there were four to six active doctors on the job. In 1920 there were two, in 1921, there is none. Prior to 1919, this territory contributed not less than \$10,000 annually to the medical profession; it was much less in 1920 and, so far, this year virtually nothing.

Now, will these people get accustomed to this? Will they learn that they have been deluded? that much of the medical service they have had in the past could have been dispensed with? And, if they do, and if this instance is an index to the situation in general, what will happen? Or, if the opposite takes place, and the complaint is carried to the politicians, what will happen?

When we come to think of it, there is little use for doctors and undertakers anyhow; for, we have Vick's and Lydia's and Caldwell's and Wampool's and Tanalac and Wine of Carduy and hordes of others to say nothing about their half-brothers and first cousins that we can read about in the advertising columns of our medical journals [Only in a few of them now.—Ed.]

About 10 years ago, I reported the first case of pellagra from the county. Two other cases in the town followed the same year. The next year, other cases occurred in the rural sections adjacent the town and, by the fifth year, cases were numerous and widespread over the county. Along about the fifth year, a progressive attenuation began and now we seldom see a case. Why? My "first" diagnosis in my first case was "Sprue." Can you, right off the reel, differentiate sprue and pellagra?

About 90 percent of the medical profession in Alabama are in a state of silent rebellion (a kind of orientation) against the law requiring reports of all cases of com-

municable diseases. Wonder if it is the case generally? Such is the case usually with a bureaucratic law. [Reporting cases of communicable diseases is all right. Doctors should cooperate with the health boards in this matter.—Ed.]

For some time, I have been keeping tab on the different devices to save gasolene and, to date, if I were to install all these on my car at the same time, it would mean a saving of 120 to 150 percent of my gas bill; still, I don't feel like treating the oil people that way; for, some of my neighbors and doctor-friends own "oil stock."

And, say, a suitable reward is offered to any one who will get that fellow wound up and started off again—that fellow what answered the egg question some months ago.

A. GRAVES.

Russellville, Ala.

NEWS FROM VIENNA

In a recent letter to the Editor, Dr. H. F. Curtis, who is spending some time in post-graduate study in Vienna, gives the following interesting description of conditions in that city:

"You may be interested in the medical conditions here. As yet, the work is not organized as it was before the war and the new form of government has made the hospital authorities less independent than they were formerly.

"There were four of us who were the first to come for this special work, since the war. Since then, two others have arrived here from the States. In regard to courses of instruction, the work here leaves little to be desired. There is a great abundance of material and apparatus of all kind. The professors are masters of their subjects and take great pains to make every point clear. Their lectures are given in English.

"The operative work in the Nose and Throat Clinics is especially good. In the Eye Clinic, one is required to take a six months' course as an interne and must speak German. Then, he will be given operative work. In the Ear Clinic, one must also take prescribed courses, put in three months as an interne and then he is in line for operative work. The laryngoscopy and esophagoscopy course, with

actual practice on the living subject, is especially valuable.

"After several months' study in the States, it is my intention to get the viewpoint of the men here and to learn their methods and technic in operations.

"Living conditions here are excellent. One can get good rooms and can live at the restaurants very cheaply because of the exchange rate.

"The people are very friendly to Americans in appreciation of the splendid work done here among the children by American organizations.

"I would like to join some association of physicians in the fall if I can find a group wanting someone in my line."

H. F. CURTIS.

Vienna, Austria.

[Doctor Curtis' report differs pleasantly from so many accounts of distress and suffering prevailing in Vienna. We hope sincerely that the city of the "Allgemeines Krankenhaus" will soon recover from its after-war depression. In matters medical, Vienna always has been prominent—since the days of Van Swieten. It were a pity if its glory had passed never to return.—ED.]

TWO CASES OF TETANUS

Fortunately, tetanus is rare. The writer had treated only one case in thirty-three years of practice, previous to the reported cases; that case terminating in recovery.

Mrs. B. had a miscarriage at about the third month, coming on suddenly and terminating rapidly before medical help could be procured. The membranes were retained but, as the patient had neither hemorrhage nor fever, these were not removed until the fourth day. They were removed with ungloved hands which, though, had been thoroughly scrubbed and then washed in bichloride solution. The bowels, which had been badly loaded, had been well moved on the third day, by laxatives and enema. The patient did well until the sixth day, when she complained of sore mouth and throat. There were patches in mouth and throat that looked red. On the eighth day, the muscles in neck and jaws were stiff; the patient could not open her mouth. Large and repeated doses of antitoxin were given, but the patient grew worse. Phenol

solution was then injected intramuscularly, also lobotoxine (lobelia) and gelsemoid. All medicine had to be given hypodermically and, as a nurse was not available, the patient would get edge of tongue caught between teeth; then her cries of agony would fill the air. The strength of two men was unavailing to open the clenched jaws, but we contrived, with a wooden paddle, to pry them open enough to push the tongue back with a probe. Large doses of hyoscine, morphine and cactin gave decided relief to the patient.

Convulsions set in on the tenth day, the patient dying on the eleventh day. It was a horrible death. Several persons were in attendance and recklessly exposed themselves, but none became infected. The attending physician had some enlarged sebaceous follicles back of his right ear; he had acquired the habit of picking at them. Nineteen days after the death of the patient he noticed that these follicles were inflamed and tender. He seemed to have a cold, and sore throat, with temperature at 100° F. Next day, he felt worse but continued at work. That night he was too ill to sleep; he found that the muscles in jaws and neck were stiff. He was rushed to a hospital and given 5000 unit doses of antitoxin. The inflamed follicles were incised and packed with gauge dipped in tincture of iodine. In about twelve hours, the rigid muscles began to relax, although the rigidity persisted for about five days.

This patient did not become very ill but had visual and nervous disturbances lasting for several days. The worst of these was, a picture of the dying woman about five or six feet away. There were red and green spots on objects in the field of vision, some muscular cramps, tremors, fleeting pains and some general soreness. Urticaria became troublesome but was relieved by piturin and local applications. A highly acid urine persisted until full doses of alkalies were taken. General conditions, while not bad, were slow to improve.

Antiseptic precautions were taken while treating case No. 1, but they proved faulty. If the diagnosis had been made two days earlier, would large doses of antitoxin have saved the woman? The infection must have been in the uterus, probably about the worst place possible. This patient had passed through many abortions. She was the

wife of a teamster and the stable for the horses was near her dwelling.

Tetanus is an awful disease and characteristic symptoms do not appear at once. Even if early treatment is instituted, much damage is done.

M. F. MINTHORN.

Castana, Iowa.

MAGIC OF BENZYL BENZOATE IN MEXICO

Like arsphenamine, the benzyl substance attracted my attention and fixed my faith in the first reports that reached me. So, I ordered one thousand 2-grain tablets as soon as they were announced, to prove them to a finish on some hopeless cases. Now, I have their finished work to tell about.

The first case was one of chronic hic-cough. I calculated that an empty stomach would best subserve the operation and that hot milk would serve as sufficient nutriment. I ignored directions and gave three tablets every four hours which seemed rational medication. In three days, the plague disappeared. It has not recurred, not even temporarily, in three months.

The next knotty case was Bright's disease or diabetes, requiring urinating twelve to fifteen times in the night and many times in the day. The disease had been installed some fifteen years, and had not progressed for four or five years. Twelve twenty-four-hour courses of the remedy were ordered, at the end of which a full night's rest was enjoyed; there has been no trouble since, now nearly three months. An old case of asthma was conquered slowly as the medication could not be continued as constantly as in the other cases.

The chief triumph was in a case of stomach catarrh of many years' standing, having degenerated into a cancer. After a month of fairly regular treatment, all of the fungous growth sloughed off and dried up. A month of perfect tranquillity has passed, thus demonstrating a magic substance with potency to cope with the distress of the mucous membrane, and destroy fungous growths that may have formed in any part. [?—Ed.]

But, there is a residue in the tablets that forms an excrement very troublesome, as it blocks the outlet and requires laxatives and suppositories to open up the highway

of nature. Maybe that obtains in those semifamished people, while well-nourished persons might escape. The empty-stomach feature is important.

I have not noticed any special symptoms of anesthesia. There certainly is nothing of a vice-forming nature in the substance

I think I have given outline sufficiently elaborate of the possibility of the wonder. I had faith in the milk feature and never employed the hot water, nor approved the "one to five tablets instructions every half to one hour," not passing 20 grains. I believe I got better results with 6 grains every four hours. The effect was certainly sufficiently well proved by the uniform results, in treatments amply protracted.

I am of the opinion that hypodermic injections would be the better method of treatment, which should avoid the inconvenience of the excrement formed by the tablets. The remedy has intravenous possibilities.

Many things have happened since my annual letter (July issue) was written. We have been in the throes of reconstruction and are not done with it yet. We were so used up by the war that we are nearly in the condition of Belgium and Northern France with at last a money famine; all the money was used by the rebels in their long occupation of the country and there is nothing to bring in money. Rubber, the principal production, will not pay for harvesting. Coffee has no price left to the grower. No one has money to pay labor; and nobody will loan any while there is danger of more revolution. The Carranza generals are said to be preparing to revolt. Hence, commerce, medicine and doctors get no money. I am the only makeshift for a doctor in the city, well stocked with American medicines, and do not realize half my current expenses. The short cocoa crop comes in May and June, but will not make a drop in the bucket, though the price is good.

There is no hope for improvement without such substantial peace and order as Obregon is now disposed to make with the United States and with all the world if the rebels will let him. Not that there is actual revolution in this zone. But, there are beginnings in the center and north, small as yet, still, every one here fears that the enemies of Mexico, with you, will

bring about intervention. So you see we are not yet nearly out of the woods.

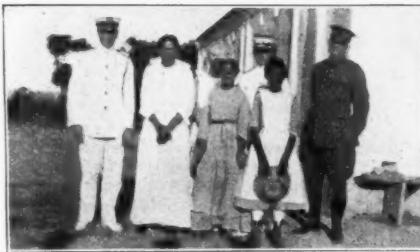
In six months more, my little capital outside of drugs will wind up unless we have a radical change that does not spell revolution.

Robert Gray.

Pichucalco, Mexico.

LEPROSY, NOW A CURABLE DISEASE

Plans are well under way to use the new antileprosy treatment for the lepers on the Island of Cabras near San Juan, Porto Rico. This work is being undertaken by the U. S. Public Health Service and will result in the cure of many of these unfor-



(Left) Capt. C. S. Butler, medical inspector of the Virgin Island, with a group of lepers, a naval officer and a Red Cross representative.

tunates who, for centuries, have been shunned as "unclean."

According to Mr. A. Fernos Isern, Assistant Commissioner of Health, in a letter to the manager of the Insular and Foreign Division of the American Red Cross, in Washington, D. C., groups of lepers will be brought in from the Island to the Quarantine Hospital and there given the new treatment, which was discovered by the noted leprologist, Dr. J. I. McDonald, director of the Bureau of Scientific Investigation at Kalihi, Hawaii. This treatment is the last word of science on this matter and has been tried with most satisfactory results in Hawaii. The preparation used is a derivative of chaulmoogra oil, which, owing to the processes used in its production, has no toxic effect on the organism, as in the case of crude oil. In the U. S. Health Department, there is enough of this medicine to treat the thirty-one lepers on the Island of Capras for about three months.

Doctors Feros, Ortiz, LaRosa and La-

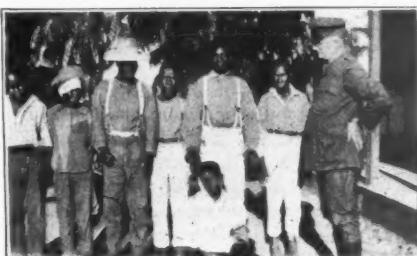
vandro visited the lepers' island for the purpose of selecting a sufficient number of them to be treated with Dr. McDonald's remedy. An arrangement has been made to treat the lepers at the Quarantine Hospital in groups and not all together, as the



Nodular leprosy with badly mutilated hands.

hospital would like, because there are not sufficient accommodations for all at one time.

The work with these lepers might have been well under way, if it had not been for



A group of lepers in Uncle Sam's island possessions.

the epidemic of bubonic plague. The medicine had been ordered from Hawaii but was held up for three or four months, by the epidemic.

Dr. Ortiz, chief of the Section of Transmissible Diseases, said, when questioned:

"Hitherto, chaulmoogra oil has been used in its crude form, by the oral route; but, because of its action on the gastrointestinal system, it was impossible to make the patients take it for more than three months, which caused scientists to begin to think of more 'possible' new formulas.

"Dr. Heiser, when director of the Health Service in the Philippines, worked out a formula composed of chaulmoogra oil, camphorated oil and reabsorptive (resorcin), of which an intramuscular application was made. Although the action was favorable in many cases, the injections



This man, who is a carpenter, has only the first joint of fingers and thumbs on both hands.

were painful and the material hard to absorb. This process was also used for some time in Kalihi, Hawaii.

"In 1918, Mr. A. L. Dean, president of the University of Hawaii, and a noted chemist, separated chaulmoogra oil into four oily acids, and then, on account of their insolubility, converted them into ethylic ethers, thus obtaining an easily absorbable ether for intramuscular use. The treatment consists in the use of the oily acid with 2½ percent of iodine chemically combined and taken orally after each meal according to the weight of the patient. The intramuscular injections of the ethylic ethers with 2 percent of iodine are given

once a week, according to the age of the patient. Besides this, the patients receive symptomatic treatment in accordance with their state of health and the development of their disease.

"With regard to this treatment, the opinion of Dr. McDonald is, that, in the case of young patients and in that of adults re-



Grounds and dormitories of the Leper Asylum at Richmond, St. Croix in the Virgin Islands.

cently attacked by the disease, the nodules gradually yield month by month until they disappear. In cases further advanced and of longer standing, the hardened nodules are softened and diminish in size, but the skin, which has lost its tone, always remains flaccid and loose. It is not possible to restore absorptions which occur in the bones or return to their normal state fingers contracted and disfigured by many years' paralysis.

The treatment indicated, within a period of from one to three years will check and absolutely exterminate the disease, taking into account, of course, that the patients will not grow new hands, fingers, etc.; nor would it be possible to restore mutilations or deformities."

During the chaulmoogra oil treatment, the medical department is particularly anxious that the patients should avoid bruising themselves, especially their feet, which are not protected by foot-coverings in that equable climate. A bruise on a leper's foot might easily result in ulcers and incapacitation, so an experiment has been made in securing foot-coverings for the lepers. Home-made sandals were not a success and the funds of the health department were soon exhausted. Then the Red Cross came to their assistance with a

suggestion that a kind of leather sandal with woven top, manufactured in Venezuela and commonly used in the islands that lie further south, might do. These sandals, called "alpargatas," with a kind of rope-soled shoe which is locally used for work in the fields, were bought by the Red Cross in quantities sufficient to meet the immediate needs of the patients and with the understanding that, if either variety proved satisfactory on trial, the Leper Asylum would find the means to continue providing them for the patients as they wore out.

MEDICAL MEN

To heal a wound, to kill disease,
To shield a life from pestilence;
To smooth a frown, the heart to please,
To quiet agony intense,
Extinguish flames that fast consume
The house of man, and ease his thought,
To render life sacred, immune,
Are greater things than gods have wrought.

So, as true artisans at toil
With stinted praise and small reward,
Shrink not from labor, nor recoil
From stubborn tasks accounted hard;
Though arduous thy work may be
Without Appreciation's voice—
Toil on, ennobling faith thy fee,
Eternal service is thy choice.

Keep in the line, deal righteously;
With never failing courage make
Stronger the fight, humanity
Needs all thy strength, then nobly take
The weapons which our art requires
And with Wisdom's tender grace
Fulfill thine own heart's great desires

JAMES A. DE MOSS.

Thayer, Kans.

MEDICAL NEWS

The Patient Ox.—According to a bulletin just issued by the U. S. Public Health Service, a French investigator has discovered that the malaria mosquito prefers cattle to human beings and will feed on them whenever she can, thus materially reducing the human malaria rate in several parts of France. He suggests fitting up stables as gigantic mosquito traps with cattle for bait. Here's a chance for the antivivisectionists and antivaccinationists to start a movement under the slogan "Spare the Ox; let the mosquito bite your own child."

Nurses' Training Schools in Government Hospitals.—Owing to the great demand for

nurses throughout the country, and especially in Government hospitals, the U. S. Public Health Service has decided to open training schools in such of its hospitals as may be fitted for the work. As a beginning, schools will be opened in the hospital at Fox Hills, Staten Island, New York, because of its nearness to New York City, and at Fort McHenry, near Baltimore, because the physical conditions and the personnel are all unusually well adapted to the work. Schools will be opened in other hospitals as conditions permit.

Decayed Teeth and Children's Diseases.—That decayed teeth are very strong predisposing causes to the "catching" of measles, scarlet fever, pneumonia, mumps, and other children's diseases, is strongly urged by the U. S. Public Health Service, which cites very considerable reductions in those diseases in cities where dental clinics have been established in the schools. At Bridgeport, Conn., for instance, diphtheria has been lessened eight percent. At an orphanage in Boston, these diseases, which had annually afflicted about one-third of the 325 inmates, practically disappeared after eight months' dental work. The absorption of pus from rotting teeth had weakened the children and made them easy victims to disease germs; and the cleaning up of this source of trouble increased their powers of resistance.

Sleep Requirements of Children.—No child nutrition worker, says the U. S. Public Health Service, can hope to get satisfactory results without insisting on enough sleep for her charges. Besides damaging the nervous system, late hours cause "sleep hunger" and make children nervous and fidgety. The Service commends the following precepts just issued by the London County Council: School children aged four years need 12 hours of sleep a day; aged five to seven, 11 to 12 hours; eight to eleven, 10 to 11 hours; and twelve to fourteen, 9 to 10 hours. Children grow mainly while sleeping or resting; do you want yours to grow up stunted? Tired children learn badly and often drift to the bottom of the class; do you want yours to grow up stupid? When children go to bed late, their sleep is often disturbed by dreams and they do not get complete rest; do you want yours to sleep badly and become nervous? Sufficient sleep draws a child onward and upward in school and in

home life; insufficient sleep drags it backward and downward; which way do you want your child to go? Tiresome children are often only tired children; test the truth of this. That a neighbor's child is sent to bed late is not a good reason for sending your child to bed late; two wrongs do not make a right. Going to bed late is a bad habit which may be difficult to cure; persevere till you succeed in curing it.

LEGAL LIABILITY FOR TRANSMITTING INFECTION

Personal responsibility for the transmission of venereal disease has now been upheld in several different phases by both civil and criminal courts, says the U. S. Public Health Service. In Oklahoma, a man has been sentenced to five years in the penitentiary for infecting a girl with syphilis. In Nebraska, the court upheld a doctor who warned a hotel keeper that one of his patients, a guest at the hotel, had syphilis, had refused treatment and was consequently a menace to the public health. In North Carolina, a woman has been awarded \$10,000 damages against her husband for a similar infection, and the Supreme Court has upheld the judgment.

The Nebraska case is important because it asserts that a physician's duty to protect the public health may, under certain circumstances, transcend his duty to hold his patient's confidence inviolable. The North Carolina case is also important because it sets aside in this particular case the legal barrier that prevents a wife from testifying against her husband and bringing suit against him.

All three cases are valuable in counteracting incorrect statements, often made, that the venereal-disease law falls almost exclusively on women and lets men go free. State laws, of course, govern in all such cases; but, the fact that every State in the Union has now adopted many, if not all, of the venereal-disease laws, gives ground for expecting similar action in other States. Certainly the wide dissemination of the three decisions should go far to curb diseased persons who deliberately expose others to infection.

Curiously enough, the District of Columbia is the only part of continental United States that has no venereal-disease laws. Congress, which makes the laws for the District, has not yet acted.

The fact, that the North Carolina decision makes it likely that marriage will henceforth be no adequate defense against a suit for transmitting infection, will probably hasten the adoption by the States of laws requiring every applicant for a marriage license to present a certificate by a reputable doctor certifying that he is free from venereal disease and providing that, without this, no license shall be issued.

Twenty States have already adopted laws forbidding persons with venereal disease to marry, seven of these—New Hampshire, New Jersey, North Carolina, Oregon, Washington, and West Virginia—having acted during the present year's sessions. A similar bill is now pending in Florida.

All of the twenty States do not require medical examination and certification that the applicant is free from venereal disease. "Such a certificate should be required in every State," insists the Public Health Service. "Any decent man with an uncured infection who marries does so either because he does not realize the seriousness of his action or because he believes that he is cured. The necessity for an examination should bring its seriousness home to him and should be welcomed by him as a protection for his wife and children. No real man should object to a medical examination required by law.

A GOOD LOCATION

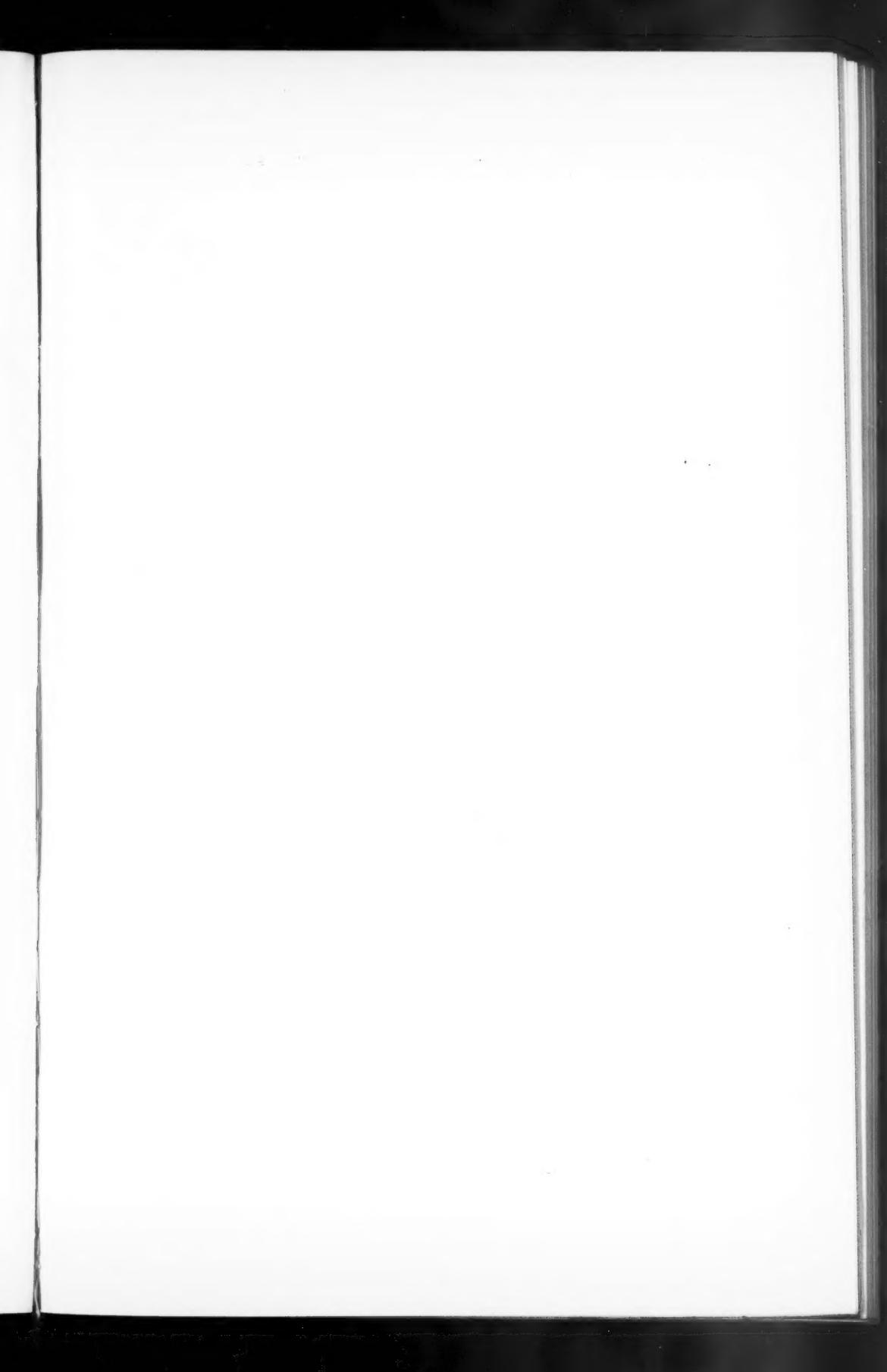
To any doctor who may be looking for a location; Broughton, Illinois, is a village of about six hundred inhabitants, in a fine farming section; fine people to work for. There were two doctors at this place until June 15. One of them, Dr. I. I. Hall succumbed to sepsis after an illness of one week. People are anxious for a doctor just out of school.

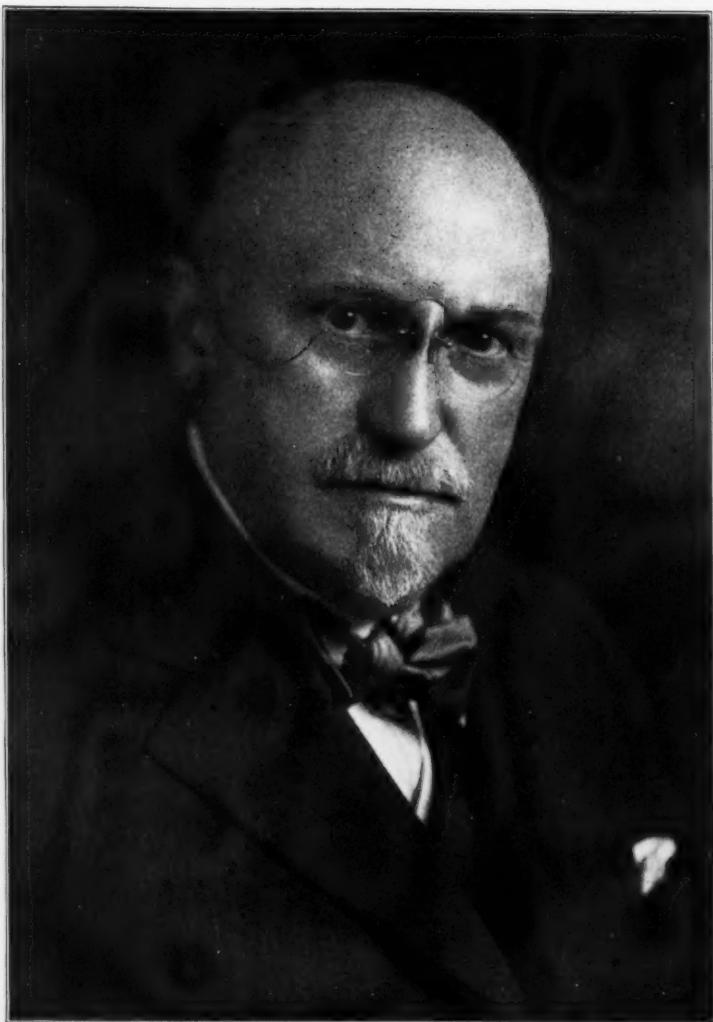
This place furnishes as much work as two doctors can do. So, a doctor could have all the work he cared to do, from the beginning.

Doctor Hall leaves an office well equipped which is for sale.

Broughton is located on the L. & N. railway. If interested write to Edith Hall, Broughton, Ill.







DR. GEORGE F. BUTLER--1857-1921

PHYSICIAN, TEACHER, AUTHOR, PHILOSOPHER AND FRIEND.

A GOOD MAN WHO, BY LIVING, HAS MADE THE WORLD BETTER.

Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR
Conducted by GEORGE BUTLER, A. M., M. D.

Food in Its Relation to Health

EDITORIAL COMMENT.—This is the last instalment of an article, prepared by Dr. George F. Butler for publication in CLINICAL MEDICINE. It is followed by expressions of the affection and high regard that we, with all his other friends, entertained for this great and good man. With this issue, "Just Among Friends" will, in all probability, be discontinued. It was so absolutely Butler's own, that we can not, at the present time, think of anybody who could carry it on in his spirit. Can you?

[Concluded from June issue, p. 490.]

IN fevers, fruits, especially in the form of fruit juices, are a most convenient and, certainly, the most appropriate of all foods. It is now almost universally recognized that beef-tea and meat preparations of all sorts should be wholly proscribed in cases of fever, as the patient is already suffering from the accumulation of waste matters to such a degree that the addition of even the small amount contained in beef-tea or a small piece of meat may be sufficient to give rise to an exacerbation.

It would seem paradoxical to say that fruit both warms and cools the body; but, such is actually the case. In summer, its acids temper and equalize the heat; in winter, its sugars warm. Sugar and acid, in fact, are so equally balanced in this food formed in the great laboratory of Nature that neither preponderates unduly or to the detriment of the other. We may take the testimony of the birds as to the healthfulness of fruit. The Arabs form a good example of a nation that to a very large extent lives on fruit. Who can be more brave than the Arab, or who possesses more dash and élan? "Give an Englishman his beef and beer," says a writer. By all means in the world, we say; but, let him combine with them good, wholesome fruit. The enjoyment of fruit as an article of diet is invaluable, and I should like to see its general consumption very much greater than it appears to be at present.

When Fruit is Injurious

Every medical man now and then comes

across patients who have dined for weeks on half a dozen bananas, a pound of strawberries, a pound of uncooked apples, or a pound of grapes or other fruit. Strange to say, it is often the poor creature who is run down who takes to this fruit craze, and, as might be expected, the injudicious feeding makes his condition worse.

To obtain the most benefit from the succulent fruits, they should be eaten at the end of the chief meal.

Bananas are an exception and may be eaten with any meal. They are very acceptable when cut in thin slices and eaten with bread and butter.

Stewed fruits often have their virtues wasted through being eaten at the wrong time. Six or eight stewed prunes half an hour before breakfast are beneficial, so are stewed figs or stewed apples eaten before breakfast.

Peeled oranges cut into thin slices, so that juice is set free, with sugar strewn over the slices, are not unlike pineapple and form a highly efficacious aid to digestion.

Value of Honey as Food

Starch and sugar, when eaten, undergo a digestive change before they are assimilated. In honey, this change has been made to a considerable extent by the bees. It is easy of assimilation, and concentrated, and furnishes the same element of nutrition as do sugar and starch, imparting warmth and energy. As a medicine, honey has great value and many uses. It is excellent in most lung and throat affections, and is often used with great benefit in place of

codliver oil. Occasionally, there is a person with whom it does not agree, but most people can learn to use it with beneficial results. Children, who have more natural appetites, generally prefer it to butter. Honey is a laxative and sedative; in diseases of the bladder and kidneys, it is an excellent remedy. It has much the same action as wine or stimulants, though without their injurious effects, and is unequalled in mead and harvest drinks. As an external application, it is irritating when clear, soothing when diluted. In many places, it is much appreciated as a remedy for croup and colds. In preserving fruit, the formic acid it contains makes a better preservative than sugar syrup; it is also used in cooking and confectionery. In early times, it is said, Palestine flowed with milk and honey, but we have far more of it today than the people of any age ever had. Honey does not injure the teeth as some sugars do.

Value of Fatty Foods

A great many people discard all fat from their diet. If there is the least bit of fat with the meat, they are very careful to trim it off and eat only the lean portion. They seem to have not only a distaste for it but never stop to think that, perhaps, this part of the meat contains just the elements required by the system. Of course, the red meat contains more proteids than does the fat, but the fat is very nutritious and serves to increase the resistance against cold, to build up the system and give it power to resist or overcome certain diseases.

Anyone inclined to "scrofula" would do well to eat some fat, so also would the tuberculous patient. An increase in the amount of fatty foods would go a long way and do a great deal to increase strength and vitality and, perhaps, prevent the further development of "scrofula" or of tuberculosis.

Of course, even fatty foods should be taken in reasonable quantities, and it is well to take a variety of fatty foods not confining one's self to a single kind of fat. Almost all the fats some people eat are obtained from butter. Butter is good, but the other fatty foods should also be used. The fat part of beef, mutton, pork, cream, olive oil, and so forth, furnish very good fatty elements.

In the cold weather especially, should

people eat more of the fatty foods. Science and experience both show that the system needs them; a person who combines them with the proteid foods has a better chance of long life than that person who subsists almost entirely on the proteids.

There seems to be a popular prejudice against pork of any kind; and, yet, bacon furnishes a very good form of fatty food. It furnishes not only the protein, as contained in other meats, but nearly twice as much fat, and the total nutrients and available energy derived from bacon are much larger than those from other meats. Furthermore, the fat of bacon is easily digested and, when combined with other foods, has a favorable action on digestion. It has been found that about ninety percent of bacon is digested and absorbed by the body. Experiment has also proven that fats increase the digestibility of other foods. For instance, beans are made more digestible when they are baked with fat meat than when they are baked without it.

Instead of letting the butcher trim off all the fat from the meat, you had better leave it on and take it home, as it contains some of the most nutritious and nourishing parts of the meat.

When eating meat, do not confine yourself simply to the lean portion pushing aside the fat, but remember that the fat nourishes and builds up the tissues of the body.

Training the Stomach

If the stomach is in a healthy condition and able to digest food, that condition will be indicated by a sense of hunger; if the system is in a disordered state, as is that of a person suffering from fever, no food is relished and the patient does not care whether he eats or not. In such a case, it is the duty of the nurse to insist on the patient taking food, the same as he would medicine—once in so many hours. Dyspeptics often literally starve themselves because their stomach suffers when they take food, and they take less and less until by-and-by the stomach loses all desire for food and almost forfeits its ability to digest it.

The only way to cure such a person is, to train the stomach into a state of activity. The stomach needs to have a healthy stretching with a good, big meal, and to have some hard work to do. I have seen

a good many patients whose stomachs were really not feeble, but they needed to be stretched by hearty meals. Once in a while, I prescribe a good square meal for a patient who complains that he does not want to eat anything.

At one time, I had a lady patient whose stomach had been pampered until it finally became so feeble and inactive that it would not act upon or even hold any food that was put in it. I was greatly perplexed to know what to try next. She was finally restricted to nothing but oatmeal gruel, but her stomach would not even digest that. I then said, "The best thing for you to do now is, to eat what you please." So, I ordered a good meal for her, everything on the bill or fare, and she ate everything she wanted. Her stomach disposed of the meal without a particle of trouble; all the vomiting and discomfort ceased and, from that time, she began to gain in health.

The time sometimes comes, in the treatment of cases that have been dieted so carefully, that a change to an ordinary, wholesome dietary becomes not only proper but necessary for recovery.

The kind of food, the quantity, and the way we eat it have a great deal to do with our health, happiness and, indeed, with our character.

Diet and Character

The influence of the stomach upon the character has always been appreciated by religious sects, especially in monasteries and numeries. It has been recognized by thinkers and philanthropists, as scores of illustrations could testify. It has been realized by schemers and plotters, who have used its agency upon their victims. But, its constant and inexorable power, from the earliest days, in causing the permanent modification of the entire human race has been little considered. It would be interesting to go back to the origin of man's divergence from a natural mode of living and to trace the influence of appetite, food,

and digestion upon the differentiation and development of separate peoples; to make finer discriminations than the common association of the term "beef-eating Englishman" with the idea of aggression and conquest, or of the Chinaman's diet of rice with his lack of energy and enterprise. It is more important, however, to consider the present and the future, to study how we may not only improve our own inheritance of blood and brain, but also how we may provide for generations to come a healthier beginning in life, better conditions in which to grow, and a more scientific knowledge of the relations of habits of life to character and to physical well-being. This is no vain inquiry for the mere pleasure of speculation. It concerns the permanence and perpetuity of the whole human family. Only when the evolutional power of the stomach is fully recognized and respected, are we ready to work effectively for individual or public health.

Intelligence and common sense are needed in the matter of diet. To get all sorts of health fads on the brain, is a disease in itself. It is a very prevalent disease, too. With a few foolish rules to observe, a whole lot of hygienic quirks to adjust and a schedule of superstitious sanitary and dietary notions diligently followed by day and dreamed of by night, is a malady which begins as a mental derangement and ends in a complete physical fizz. No room left for a spontaneous life, no place for free, joyous liberty. Not a minute's peace for free, rollicking disregard. Everything fixed, every minute disposed of, introspections without number. Forebodings, misgivings, hovering vaguely about the mind, like flocks of carrion crows. Such a life is not worth living. One might a thousand times better go back to the reckless régime of a rough rider.

"Eat less and play more. Indulge in less fret and fume, and more in fruit and fun."



Dr. George Frank Butler, 1857-1921

DR. George F. Butler, whose demise we announced briefly in our last issue, had been associated with THE AMERICAN JOURNAL OF CLINICAL MEDICINE more or less closely since 1908, when he directed the Postgraduate School of Therapeutics, a department of the journal that continued until and including 1911. Even before assuming directorship of this special department, Doctor Butler frequently contributed to the reading pages of the journal.

In 1912, when the Postgraduate-School feature was abandoned, Doctor Butler took charge of the department "Just Among Friends," with the subtitle "A Department of Good Medicine and Good Cheer for the Wayfaring Doctor." It was undoubtedly his more or less informal "talks" in "Just Among Friends" that most endeared him to our readers. This department was not intended to be and never was one of strict medicine. Nor was it filled with outside contributions. With one or two exceptions only, the text was supplied entirely by Doctor Butler himself and he found there a medium for many a cheerful message to the general practitioner, many a word of encouragement.

Butler's speculative mind, which was tinged with a trace of mysticism, delighted in wandering among the bypaths of both intellect and soul. While many of his contributions in the "Just Among Friends" department contained good medical lore, he preferred to address himself to the physician as a thinking man, to appeal to his higher nature, as it were, to remind him that his patients were not simply physical entities, the gearings of which had gone out of order, but that each one had an intellect and a soul that had to be appealed to no less than that he required direct medical treatment.

It will be difficult, if not impossible, to continue this department, that was so essentially Butler's own, in Butler's spirit. Indeed, there is no one we know who can take his place—he was so entirely *sui generis*.

In the following, we print a number of farewells that have been presented from some of Butler's own particular friends. Not one of them but loved him for what he was. None of us would have had him

other than he was. These contributions come from members of the editorial staff, from members of the Chicago Academy of Medicine, from members of the Press Club of Chicago, and from other friends.

I have known Doctor Butler for twenty-two years, having first made his acquaintance in the summer of 1899. He was at that time editor of *The Medical Standard*, published in this city, and I became his assistant editor. We were very closely associated. On account of this professional connection, we came to know each other well, and this acquaintance developed into a close personal friendship which has extended over my years of connection with THE AMERICAN JOURNAL OF CLINICAL MEDICINE and the Abbott Laboratories.

Doctor Butler was not only one of the most graceful writers in the medical field, but was one of our most intellectual and at the same time one of our most lovable men. He knew scientific medicine as few men know it; yet, he was more concerned about the *man himself* than he was about his diseases; more interested in doctors as human beings than as practitioners of our art. Through everything he wrote, there was a constant effort to humanize things, to make them understandable, to appeal to men's hearts and minds rather than to look at things purely from their material aspect.

It was this humanity in him which made him one of the best loved men of the medical profession.

His death came as a great shock to me. On the Thursday that he was taken sick, in Boston, he had lunched with Mr. Clough and myself at a little Bohemian restaurant in Boston, where the wall decorations were verses from the Rubaiyat. The place pleased him, and the service pleased him and, in conversation, he was in one of his happiest and wittiest veins. How little I thought during that happy hour that I should never see him again! I feel his loss keenly, but the memory of his life will always be sweet.

ALFRED S. BURDICK, M. D.
Chicago, Ill.

Of all the men with whom I spoke about Butler's rapid exit, not one made use of

the hackneyed phrase "poor fellow." If anything, there was an unexpressed under-current of envy. And, yet, who would envy Butler anything good that came to him? After a life full of work well done, replete with friendships, good times, cheery and sympathetic associations, after such a useful life, to be called away quickly, without a prolonged and agonizing period of invalidism, to pass away valiantly, "with his boots on," as the saying is—'tis something worth wishing for.

Butler impressed me in many ways; there were so many of him. As a physician and teacher, I hardly knew him. As a writer, as an editorial colleague, he was a delightful associate. His kindly, cheery and optimistic views of life were attractive; perhaps all the more so, as one could not but conclude that they were the result of hard soul storms, of strenuous stress and struggle. I have never heard him say an unkind word about any one, even though he could express adverse opinions if these were justified.

Butler's genuine pleasure, without any coxcombr, in some particularly good bit of writing was striking. He would be literally "tickled" when he could tell us of some specially bright essay, a new book, some new verses. With it all, though, he manifested an almost touching desire for the approval of his friends. Repeatedly, I had the privilege of reading manuscripts of his before publication; and, invariably, Butler would ask for criticism or suggestions. His work was real, genuine, truthful; he honestly wanted to give the best he had, and, that best had to be of a high order. However, while seemingly taking from his friends, he actually gave to them from his own abundance; for, who of us has not been the better for having known Butler? Would that there were many such as he!

H. J. ACHARD, M. D.

Chicago, Ill.

My friendship with Dr. George F. Butler dates back to the days when he was a medical student, working his way through college by serving as a druggist's clerk during his spare hours. I soon discovered that he was above the average run of drug-store clerks. His broad culture, his taste in literature, his interest in general science, as well as his unusual knowledge of therapeutics, drew me to him and developed

into a life-long friendship. A few years later, I enjoyed the privilege of having him as a traveling companion on a long lake voyage, and it was then that I learned to appreciate fully his worth. The little irritations of travel are sometimes a severe strain on friendship; but they were not so with Doctor Butler; the more closely one was associated with him, the more one recognized his natural nobility of character. His cultivated and cultured mind and his keen sense of humor combined to make him a delightful companion. Although his professional work ran, in the main, along other lines than those of the family physician, yet he belonged to a type that is growing all too scarce—the physician of broad education, the gentleman of the old school, the doctor who is looked up to by the community as a leader, the embodiment of that culture which puts to shame the cheap imitations of that much abused word.

WILLIAM RITTENHOUSE, M. D.
Chicago, Ill.

George Butler has reached the end of the trail—his "long carry" is over and he voyages o'er unknown waters. We, his friends, who have traveled with him thus far, and must still continue to tread the appointed path, continue the journey with less assured tread and subdued mien, for, the loss of such a tried and true comrade weighs heavily. We remember the "rough going" rendered tolerable by his kindly philosophy, the gray days made bright by his cheerful optimism, and the moonlit evenings when things ethereal drew very near us under the magic of his imagery. Some of us, whose burdens at times proved too heavy, recall with gratitude the strong hand that lightened the load; and even the stoutest voyageurs are glad to admit that the difficult places were more easily traversed by reason of the skillful guidance and sage counsel Butler extended. Distinctly human, familiar with the foibles and frailties of his fellows, and possessed of the ability to penetrate the, often, ugly mantles that cover men's souls, he was a charming companion, a friend worth having and a teacher who imparted real knowledge. No man who met him failed to gain something by the acquaintance and those who knew him longest and best were the most benefited.

Now he has gone, one feels, that words—winged though they be—must fail entire.

ly to express what he meant to us while here. He lived, worked, loved and was loved and, passing, leaves behind delightful memories and an impress for good upon his fellows which will last till they also reach the trail's end.

Perhaps, somewhere, sometime, out of the wilderness of worlds, we may, at evening, come all together into the final camp.

GEO. H. CANDLER, M. D.

Chicago, Ill.

So, Butler, you too have gone. Unusual to find a physician nowadays possessing, yet only now and then showing, that delightful gift of erudite scholarship and always avoiding the imputation of being pedantic. Your genial versatility and flash of true wit needed no brain carpenter to trephine the crania of your listeners to force your point. Really, you were a delightful toastmaster, no Yorick—yet, you “set the table in a roar,” and, as the “Autocrat” would have it, you “saw bright things in all possible subjects.” Nor were you unkind. It is so damned easy to be a toastmaster and a wit of the sort that ever advertises the fact (modestly?) that the ringmaster is, so to speak, a major operator.

We do not suppose you will be classed by some with others who have slipped quietly away from the board of the Chicago Academy; but you were a mighty good physician, a far better teacher and, best of all one of the gentlemen of your profession. Be assured, you will be missed grievously by some. But, we will all remember you, Butler, when sessions are merriest and men wittiest. A pleasant journey!

CHESTER HENRY KEOGH, M. D.
Chicago, Ill.

One of the great lights of American medicine has passed away. Urbane, courteous, and cultured, Dr. George F. Butler stood high in the ranks of the medical profession. His textbook on therapeutics will maintain its place in the ranks of the rapidly changing works on pharmacology and therapeusis. Like himself, it is clear in the statements of therapeutic laws and free from doctrinaire tendencies. In his “Cubism in Medicine,” he emphasized his opposition to these doctrinaire tendencies. In his “Love and Its Affinities,” he dealt with the question of love free from either

undue sentimentalism or Freudian coarseness. This might well be counted a scientific contribution. At the time it was written, contributions of its tone and scientific acumen were rare.

The analytic side of psychological medicine greatly attracted Doctor Butler, and it found literary expression in his “Exploits of a Physician Detective.” This was free from the crudeness of the Sherlock Holmesian type of detective stories and owed much less than these to Edgar Allan Poe. His literary work, his Sonnets of the Heart, Songs of the Heart, Treasures of Truth, Travail of a Soul, and Echos of Petrarch, all were of high order and evinced an exquisite sense of beauty. He was early a fellow of the Chicago Academy of Medicine, and his literary skill, scientific acumen and geniality did much to give that organization the high status it attained in the nineties.

To say that he will be greatly missed, is to utter a platitude which fails of justice to this great physician.

JAS. G. KIERNAN, M. D.,
Secretary, Chicago Academy of Medicine.
Chicago, Ill.

Vale, Butler:

Of all my dear friends who have passed on, none will be more sadly missed than will George F. Butler.

It was my good fortune to know Dr. Butler in his many-sidedness as few men knew him. A similarity in tastes and ideals drew us together three decades ago, and we were close friends and companions ever after.

Dr. Butler was one of the most gifted men in the medical profession. As a medical writer, he had few equals and no superiors. His work of a general literary character showed genius of an uncommon order. His verse showed the true poetic touch, and he often rose to the highest plane of poetic expression.

As an orator, Dr. Butler shone most brilliantly. A master of English, witty, and with a keenness of repartee excelled by few, his speeches and discussions were most notable.

Few men were as loyal to principle and friend as was Butler. This alone was sufficient to account for the host of friends who loved and admired him.

Among all the men of my acquaintance,

I know not one who can quite fill the place left vacant by George F. Butler.

To me, his death was an irreparable loss.
G. FRANK LYDSTON, M. D.
Chicago, Ill.

The news of Doctor Butler's death reached me while I was touring in the Berkshires, where he especially delighted to spend his vacations. It was there that I spent with him part of one summer which he made the occasion of his charming sketch called "Automobiling With A Mere Man."

All this suggests to me that it was my good fortune to know him best as a play-fellow. No one can claim to know all of a personality so many-sided; but I think that it is in the play times that we come nearest to seeing the individual as he would himself prefer to be. I am sure that it was in this way that I came to know the essentially poetical quality of his mind and his remarkable ability to understand another's point of view. No one ever had to wait for him to "get the point," whether the "point" meant a bit of humor or a serious request for his help in any way. I speak with knowledge, for, he was to me both the jolly companion of a holiday and the older brother in more serious affairs. I think it was this ability to put himself in the other fellow's place that made him at all times proof against the de-humanizing influences in our profession. No amount of scientific training could ever blind him to the plain fact of a human being sick and in trouble. One of the last acts of his life was, to meet a situation of this kind with such tact and kindness as to win the deepest gratitude from people whose names he scarcely knew. I think he would have chosen to end his work in just that way.

BURTON HASELTINE, M. D.
Chicago, Ill.

Another of our classmates has passed into the great beyond, and we are again reminded how short is the span of life. Doctor Butler was a very able and conscientious physician, who commanded the respect and admiration of his classmates and colleagues. The last meeting of our class, '89, was May 14th, when a party of fifteen left Paducah, Kentucky, on the Steamer Paducah, for a trip up the Tennessee River, as guests of our classmate,

Doctor Frank Boyd of Paducah. I made a personal appeal to Doctor Butler to join the expedition; he finally consented and repeatedly said that he had the most enjoyable time of his life. Doctor Butler, Doctor Minahan of Green Bay and myself returned to Chicago together, and each shook hands with the understanding that we would repeat this yearly outing from now on. Again, we are reminded not to postpone taking these outings.

Doctor Butler graduated in medicine just as the new era in Pathology and Bacteriology was ushered in. He became an author of one of our leading textbooks on *Materia Medica* and taught that branch in the College of Physicians, and was highly honored by his associates. He was a man of firm convictions for right living; he had a wide and varied experience; in charge of the sanitarium at Alma, Michigan; also as medical director at Mudlavia, and finally, at the North Shore Health Resort at Winnetka, which position he occupied at the time of his death.

As a writer, he showed marked ability. He was a regular contributor to the various medical journals; also wrote a number of books, the last of which, "How the Mind Cures," is one that every physician should read.

E. PERRY RICE,
Chicago, Ill.

George F. Butler went through life much like a prospector in the gold country, ever seeking the true and rejecting the false. He was not conscious that he did thus and so. His course of action was innately characteristic of the man. Naturally, one visualizes in a closeup an other who has registered the eternal fadeaway. I saw Dr. Butler, for the last time at the Chicago Press Club, the Friday before he left for Boston—for him the ending of the long, long trail. He entered, glanced alertly about him, and, greeting me, came to where I sat. "I received that book you sent to me," he said. "It's all right. And, I received your letter. It impressed me. I intend to preserve it." The book he referred to was Will Levington Comfort's story, "Down Among Men," built about the Russo-Japanese war and which extols and exemplifies the latent attribute "compassion." I had written to Dr. Butler, calling his attention to this rare and little thought of word,

"compassion." questioning "Isn't it possible that there is something in life that you and I, with our rigid rule of reason, have overlooked, to our own misfortune?" Dr. Butler, continuing, said that the word as well as the thought—"compassion"—was new, and, that it opened a far-reaching mental vista to him. He added that the use of word "love"—as Mr. Rockefeller, Jr., used it to delineate the feelings which should exist between himself and his Colorado Fuel and Iron employees—sounded muddled and maudlin—impossible; but, "compassion" was exalting and meant a far loftier feeling. And, compassion, he went on to express himself, properly was not, and should not be, mere charitable forbearance and assistance by the exalted toward those at the bottom of the ladder. It should be more than the mere absence of condemnation. "The same compassion should be felt," he explained, "by those of low estate for men who have lost the feeling of compassion, to their own undoing—who have come to be compassionless."

I narrate the foregoing to throw a far-reaching searchlight into a soul that has gone hence, unto its last accounting and great reward.

Great actors; playing many parts in the drama of life, anon, loiter in the wings, and, touching elbows with their lesser fellows, reveal their own profounder selves.

Having spoken as I have written, George F. Butler went out and away from the quick, unto the dead; and alack, the curtain falls; the lights go down.

GEORGE W. WEBER.

Chicago, Ill.

George F. Butler is dead. Conventional expressions of regret, trite words of eulogy, would be out of place if applied to him. He was a doctor and, therefore, knew what every-day matters birth and death are; he was too wise to think of his own death as more than just one of the everlasting round. Yet, all day long I have been trying to think what the world will be like without him. And, I was neither a relative nor a chum; simply a friend.

Above all things, George Butler was honest with himself. Maybe that was why he seemed so necessary. He gave me for publication a paper he wrote for some literary society, the subject of which was, *The Art*

of Writing. In this paper, he advised the writer to be more critical of his own work than any other person could possibly be. This canon he applied to his own writings. Though they never called for apology, he never overestimated them. I never saw a writer who was more modest. This is the highest type of clear-cut, intellectual honesty. When such a man dies, it is necessary to plan the world all over again.

GEORGE STEELE SEYMOUR.
Chicago, Ill.

Please allow me a few words concerning the late Dr. George F. Butler. Many a poet has lived and died who never wrote a line as

"Many a gem of purest ray serene,
The dark, unfathomed caves of ocean bear;
Many a fair flower blooms unseen,
To waste its fragrance on the desert air."

If Dr. George F. Butler had never written a line of poetry he would, nevertheless, have been a poet. He had the instinct of the true poet, and that, from my standpoint, was the tinting of the character of a strong, true man.

The mere composition of verse does not indicate that the maker thereof is a poet, any more than the possession of a diploma from a school of medicine makes an accomplished surgeon, or any one who is commissioned in the army is thereby a gallant soldier and able officer. Often such are surgeons or soldiers, but the parchment does not make either, except in name.

Doctor Butler's mind and heart teemed with the high thought and manly impulse that gave him the gift of poetry, the kindness of a true friend, the charity of human sympathy, the admirable traits of an honorable gentleman.

Among the guild where I knew him best, Doctor Butler was a personage of exalted standing and he was respected and beloved. His passing brought deep sorrow. My prayer is, that his soul's future may be that which I would wish for my own soul.

WM. LIGHTFOOT VISSCHER.
Chicago, Ill.

To have enjoyed an intimate friendship with Dr. George F. Butler, was a privilege.

He was a man of many highly developed talents, and, like the pure diamond that he

was, every side or facet radiated a scintillating brilliancy that was not only pleasing but illuminating.

As an author, he was original and his writings presented a finish that marked him the master. As a speaker upon serious subjects, he was deliberate and slow of delivery, but his words carried conviction.

It was as a raconteur that Doctor Butler rose to his full glory. His stories were always original, entertaining, and full of mirth. His toast "To the Ladies", delivered at the banquet of the American Medical Editors' Association, June 16, 1913, we believe was his masterpiece and to be always remembered by those who heard

him and to be recalled whenever the "fairer sex" is the subject for a banquet toast.

He presented a comparative analysis of the component parts of women where cutting satire was so softened by beautiful comparisons and wonderful word painting that prose was made poetic.

At the sessions and banquets of the American Medical Editors' Association, Doctor Butler's passing will be greatly felt. His very presence was an assurance of something good, whether it be a social chat, an original paper or a banquet address.

J. M. MACDONALD, JR., M. D.,

Secretary, American Medical Editors' Association.

And, so, "just among friends," we bid a sorrowful goodbye to Butler, in the flesh. Yet, Butler himself, his cheery friendship, his charm of character, his honesty of purpose, his sympathetic understanding of the soul—all his truly human qualities that raise man to his highest level, remain in our hearts as cherished memories, and, thus, Butler can not die but will continue to live with us.

SLEEP AND DEATH

*And daily from the shore of sense
I sail into the sea immense
Of quiet sleep.
The passage is so vast, so deep,
And yet no fear keeps me away;
I hope to rise the coming day.
There is a passage more severe
When pilgrimage ends in a bier—
The sun that sets
Seems ne'er to shine again. 'Tis death.
And yet my fear to die is vain,
I know I rise to life again.*

DR. GEO. F. BUTLER.

Among the Books

O'HIGGINS: "THE SECRET SPRINGS"

The Secret Springs. By Harvey O'Higgins. New York. Harper & Brothers, Publishers. 1920.

It is not entirely a novel departure for lay authors to write books on medical topics. To speak only of more recent times, we have that transcendental and inspiring "Key to the Scriptures" (and then some), entitled "Science and Health." Also every professor of physical prowess and of the training of large-muscled arms has perpetrated a volume on physical culture; every food crank and dietetic expert has at least one book to his credit describing how medical men are hopelessly mistaken in their teachings of diet, how only he, the distinguished author, has the real goods. However, most of this kind of literature is intended for lay consumption, with the purpose of attracting clients, and is more or less in opposition to physicians.

For a layman to write a medical treatise that is, in all sincerity and seriousness, addressed to physicians, is a somewhat unusual procedure, even though that, too, is not unheard of.

When Freud's ideas of psychoanalysis were first promulgated, physicians reacted to it very much as intelligent laymen did. With the exception of alienists and some others who are interested in the problem "ex officio," as it were, and who honestly tried to make head or tail of it in the attempt to render the method of service for the benefit of the many obscure neurotic and "neurasthenic" patients—the majority of people, including physicians, were affronted by the astounding assertion of Freud amounting to the claim that virtually every dream, every unexpressed thought or wish had a sex basis and that even children and babies were under the direct influence of the almighty sex force—usually in an adverse sense. It made no difference that Freud "sublimated" the sexual basis, in a manner of speaking, employing the term in an unusual, "Pickwickian" sense.

The terminology employed by him, the pitiless reduction of the most innocent acts, for instance, in babies, to sex influences, was offensive and created much ardent opposition to Freudian teachings. Moreover, as is always the case, there were a few who read the detailed disquisitions of Freud and his followers for the sake of the salacious titillations that they might afford.

Still, it must be realized that many mental and, indeed, numerous physical aberrations might find a correct explanation and, therefore, a successful treatment if recognized as "defensive reactions," "sublimations" and so forth, of certain mental processes, emotions and urgings. If only a less repulsive and a more reasonable explanation could be found, an untold amount of good might result. That is just exactly what has been accomplished by the book before us.

If the book has a layman for its author, this is so merely by way of representation, in a way; since all the material is a reproduction of talks and information given by "Doctor X." who, in the Postscript, is disclosed to be Dr. Edward H. Reede, of Washington, D. C., a psychiatrist of note. Mr. O'Higgins acts as the Doctor's amanuensis, reporting many talks during after-office-hours' visits, in which he was the eager questioner while Doctor X. disclosed to him the secret springs of health, as he had, himself, analyzed them. Thus was afforded the explanation of a thousand mysteries in human character and conduct that have puzzled many people, especially students of psychology and of social problems. We find, for instance, such questions dealt with as the unconscious origins of ill health. The conversion of a mental pain into a bodily pain is a common device for freeing the mind of unbearable distress. Cases of heart disease have turned out to be merely examples of the rapid heart of instinctive fear. Shell-shock, Doctor X. avers, is not a disease of cowards, but of brave men. It afflicts only

the man who refuses to allow himself to be conscious of a feeling of fear. A repressed instinctive emotion may transform itself into the symptoms of almost any physical disorder that will help the patient to escape from his mental distress.

"If you wish to keep well, do not try to repress your emotions, your instinctive feelings, your compulsive thoughts. Do not act on them, necessarily; but always allow them to drain themselves off in your conscious mind. 'However mean and cowardly and impious and undutiful and low they may be,' Doctor X. advises, 'accept them into the most airy chamber of your thought and examine them there unabashed. If you drive them down into your secret cellar, they may end by tearing down the whole house. If you welcome them into your parlor, you may be surprised to see how quickly they will wash their faces and change their clothes and make themselves respectable."

Interesting? Well, rather. The Reviewer has rarely been so greatly attracted by any book as he has by this. He is not going to attempt to enter into the argument any further. The specimens quoted may be sufficient to attract your curiosity and to lead you to study the book for yourself. It truly is worth reading from cover to cover. And, the benefits to yourself and to your patients will be great.

"OPTIMISTIC MEDICINE"

Optimistic Medicine. Or the Early Treatment of Simple Problems rather than the Late Treatment of Serious Problems. By a Former Insurance Man. Philadelphia. F. A. Davis Company. 1921.

The olden times, when the Healing Art was invested with awe by the ignorant and when the medical man was supposed to be endowed with supernatural forces, are fortunately past. In contrast, we now have an era in which the physician scorns to impose upon the fears of his patients and takes them more into his confidence, thus establishing a sort of partnership in which the patient gathers the data for consideration by the physician and the latter consults with the patient and gives him the benefit of his naturally greater technical knowledge of the importance of the facts submitted.

In its modern aspects, Medicine differs thus radically from old-time methods. The cooperation between patient and physician, the elimination of fear, the introduction of cheerful confidence, and numerous other

factors have contributed to make the well informed and well educated physician of today a power for great good; this works fully as much for the prevention of disease as for its cure.

If the problems entailed in these newer conceptions of medical practice are delineated and discussed by a layman, as in the book under consideration, that need not deter us from granting it a respectful and a sympathetic hearing. Indeed, it is difficult to believe that the anonymous author is not a practicing physician himself. He is so entirely in touch and conversant with the problems confronting the practitioner that he must, at least, have had a wide and familiar acquaintance with our profession. Also, he has formed many very shrewd and correct ideas concerning the preservation or restoration of health. Optimism, humor, fear, and other emotions are fruitful agents for good or ill, as the case may be. Hence, "The depressed patient, normally of alert mind, who can be trapped into an exhibition of a natural display of humor may have received a more effective tonic than anything which can be taken out of a bottle." Also, "it is natural that some physicians should be optimistic and others pessimistic; but, the pessimistic doctor should change his business."

"Optimistic Medicine" is not a textbook of Medicine, as such; it is a textbook of the practice of medicine in so far as the personal relations of physicians and patient are concerned. It deals with matters and questions that are not, usually, referred to in textbooks, and, but rarely in medical-journal articles. Still, we have, ourselves, discussed many of these same problems editorially, and have read very able articles of the same kind in other medical journals. Withal, the book is serviceable not only for the physician himself, but, no less, to the intelligent patient. This will become quite apparent by quoting the titles of at least some of the chapters.

The various questions taken up and discussed are as follows: Optimism as a remedial measure; cooperation between doctor and patient; building immunity to disease; childhood and its problems; adolescence and the family doctor; the house-mother who worries; the tuberculosis suspect; the overworked business man; the early grandmother stage; acute diseases among the elderly; the celibate of fifty or sixty; preserving the special senses; re-

taining efficiency late in life; maintaining the vital organs; mental torture of the body; getting back to that which is natural.

A table of contents such as that just mentioned can not but carry much that is replete with fruitful suggestion and inspiration. This book can be recommended cordially to all general practitioners; while specialists will no less find valuable aid in it.

HACKH: "CHEMICAL REACTIONS"

Chemical Reactions and Their Equations. A Guide and Reference Book for Students of Chemistry. By Ingo W. D. Hackh, Ph. C., A. B. Philadelphia: P. Blakiston's Son & Co. 1921.

As Mr. Hackh states in the prefix to his valuable little book, the correct balancing of chemical equations, particularly those of oxidization and reduction, is usually quite difficult for the beginner in chemistry and is by many never mastered.

This book develops the subject in a logical manner stating the fundamentals completely, thus leading the student up to the point where he is enabled to handle a chemical equation without assistance. The questions and problems given at the end of each chapter, when faithfully worked out, can scarcely fail to illustrate the material of the text and make it clear to the student, who, without such an aid, often fails almost completely to grasp this most fundamental and, perhaps, most difficult part of inorganic chemistry.

As a supplement to the regular textbook used in the courses of beginning chemistry, the book should prove of considerable value. The author has presented the theory of chemical equations in a logical and understandable manner.

RYAN AND BOWERS: "TEETH AND HEALTH"

Teeth and Health. How to Lengthen Life and Increase Happiness by Proper Care. By Thomas J. Ryan, D. D. S. and Edwin F. Bowers, M. D. New York. G. P. Putnam's Sons. 1921.

"It is almost unbelievable to many that the squeezing and contraction of blood vessels—due to the abnormal change in the dental arch brought about by early loss of these important teeth (viz., the deciduous)

—may be the actual cause of backwardness in school studies, delinquencies, degeneracies, and even mental defectiveness."

The amplification of this assertion, copied from the Introduction of the book, forms the principal reason for its existence. It comprises actually the basis for all teachings regarding the necessity for preserving the health of these important and, even, vital parts of the body. All else, relating to the care of teeth in older children and in adults, follows logically from what is said about the baby teeth.

To say that the book is worth while is drawing it mildly. It is an essential guide for the physician; not only for the care of his patients, but, no less, for his prophylactic work in teaching his patients and their parents how to prevent much of preventable illness.

The seventeen chapters are readily grouped in three parts. The first contains discussions on the real meaning of teeth; tooth care commences with the grandparents; why the mother should nurse her child; what mothers should know; helping Baby with his teeth; the teeth of children; how sugar sucks the lime out of teeth.

The second part deals with crooked teeth and twisted brains; pyorrhea—its cause and cure; focal infections; teeth and health; epilepsy may be caused by tooth decay; why we need an x-ray examination.

Finally, the chapters of the third part are on how zone therapy relieves tooth pains; mouth washes, tooth paste, apples, and tooth brushes; the dental dispensary in industry; free dental clinics—the country's greatest need; and a story reprinted from the *American Magazine*, "How I found health in a dentist's chair."

Get the book, Doctor, and study it. Then, give it to your patients to read. They will thank you for doing so.

MEDICAL PUBLICATION CATALOGS

This seems to be a good time for publishers to issue catalogs of their medical publications. We have before us two attractive lists which make us wish to invest heavily, even though we are not personally in active need of new books—not being in practice. A good many of these new publications have already been announced in the book department of CLINICAL MEDICINE.

CINE. Others we hope to discuss in the near future.

The J. B. Lippincott Company issues a small pamphlet covering its medical and surgical publications. Some of those that we have marked with a blue pencil are, Earle: "Diseases of the Anus, Rectum and Sigmoid; Flagg: "Anesthesia;" "International Clinics," which ought to be well known to the readers of CLINICAL MEDICINE; Krehl-Beifeld: "The Basis of Symptoms," an excellent book which we discussed several months ago; Karsner: "The Principles of Immunology;" Thomas and Ivy: "Applied Immunology;" and many others. Copies of this catalog can be secured by writing to J. P. Lippincott Company, Philadelphia.

The C. V. Mosby Company, St. Louis, Mo., issues an illustrated catalog in book format which bears witness to the healthy and well-merited growth of this relatively young publishing concern. We find that Hertzler has made use of the case-histories idea, producing a work on "Clinical Surgery by Case Histories." Willard Bartlett has followed in Crandon's footsteps, writing a two-volume work on "The After-Treatment of Surgical Patients," certainly an immensely important subject. The well known French orthopedist Calot has a two-volume work on "Indispensable Orthopedics," the translation having been done by A. H. Robinson. Kouindjy and Stragnell, "Physiotherapy," presenting a study of the practical application of methodical movements, massotherapy, mechanotherapy and physical reeducation, promises to be very serviceable. Victor C. Vaughan bears witness to the present-day development of medical sciences by his splendid work, in three volumes, on "Epidemiology and Public Health." Israel Bram's book on "Exophthalmic Goiter and Its Nonsurgical Treatment" should attract the interest of the general practitioner. Jones, "Basal Metabolism and Its Clinical Applications" is a very timely publication in view of the fact that basal-metabolism studies have assumed such an important position in the study of patients.

There are numerous other splendid works mentioned in this catalog which will well repay your study. To be sure, if you send for it, your bank account will be depressed because you will inevitably order some of the books. That, however, will not be merely an expenditure but rather an

excellent investment.

MUNSON: "COMMUNICABLE DISEASES"

Hygiene of Communicable Diseases. A Handbook for Sanitarians, Medical Officers of the Army and Navy, and General Practitioners. By Francis M. Munson, M. D. Illustrated. New York: Paul B. Hoeber. 1920.

Our knowledge of communicable diseases and of the methods of controlling them has advanced so rapidly of late years that any textbook on the subject becomes obsolete in a very short time. This book is thoroughly up-to-date and noteworthy in its comprehensiveness. While, as its title indicates, it is intended chiefly for what might be called the professional sanitarian, yet there is much in it of interest to every physician. At the present time, it is perhaps the farm home and the country village that are farthest behind in the matter of practical sanitation. The country physician can find in this book the detailed information which he needs to aid his clientele in making their surroundings more healthful.

The comprehensive character of Doctor Munson's book may be inferred from the following list of various problems of sanitation treated:—namely, Personal; Hospital; Quarantine; Military; Naval; Railway; Municipal; School; Rural; Prison; Industrial; Exotic; Great Disasters.

This work will, no doubt, take its place as a standard guide to the subject.

BAKETEL: "SYPHILIS"

The Treatment of Syphilis. By H. Sheridan Baketel, A. M., M. D. Illustrated. New York: The Macmillan Company. 1920.

Any reader who desires to learn the details, in minutiae, of the preparation and administration of arsphenamine or neo-arsphenamine (popularly still called "salvarsan" and "neosalvarsan") can find them in this book. The author states in his preface that the need of such detailed information on the part of those who have never used the intravenous method of injection, or whose acquaintance with it is limited, is the *raison d'être* of the work.

The aim has been, to set forth everything relating to the treatment of syphilis, without unnecessarily increasing the size of the volume with long chapters on history, diagnosis, and prognosis which may be found in other text-books on the subject.

BROWN: "SYMPATHETIC NERVOUS SYSTEM"

The sympathetic Nervous System in Disease. By W. Langdon Brown, M. A., M. D., F. R. C. P. Illustrated. London: Oxford University Press. 1920.

This book is based upon the Cronian Lectures delivered before the Royal College of Physicians, at London, in 1918. The author believes that the general practitioner has an exaggerated idea of the complexity of the general plan of the autonomic (or vegetative) nervous system. It is really simple, and a clear comprehension of it would aid in its elucidation of many clinical problems.

Therefore, these lectures are devoted to describing the relations between the autonomic system of nerves and certain groups of diseases, such as, affections of the endocrine glands, of the digestive and circulatory systems, and glycosuria. The close interaction of the endocrine glands with the sympathetic nervous system on the one hand and with the reproductive organs on the other is a fact of paramount importance in the understanding of the emotional response of the sympathetic nervous system, and of the influence of emotion on structure. The author has made interesting a subject which, as usually treated, is dry enough.

McCONNELL: "PATHOLOGY"

A Manual of Pathology. By Guthrie McConnel, M. D. Fourth Edition, thoroughly revised. Illustrated. Philadelphia and London: W. B. Saunders Company. 1920.

The fact that the present edition of this work is the fourth, with thorough revision since 1906, and the seventh reprinting, is evidence that the book meets a want. Those who do not feel the need of the more extensive works on the subject will find here an up-to-date textbook on pathology, condensed and yet clear and comprehensive, sufficient for all except those who make a specialty of the subject. As a work of ref-

erence for the busy practitioner, its value is enhanced by the typography—the various-faced type aiding in quickly finding information on a given subject.

CHILD: "NERVOUS SYSTEM"

The Origin and Development of the Nervous System, from a Physiological Viewpoint. By Charles Manning Child. University of Chicago Press. 1921.

This is one of the University of Chicago Science Series, by the professor of zoology. It is unique in being first of all a consideration, in the light of recent experimental investigation, of certain of the physiological conditions which antedate the appearance of the nervous system, and with which its appearance and development appear to be closely associated.

In this utilitarian age, there are many who regard nothing as practical which does not directly bear on the question of getting results. This type of mind would be apt to regard this interesting little book as of little value to the busy doctor because it seeks merely to set forth the basic facts of nerve development. The man who calls himself practical asks: "What good is it to me to study the way a nerve cell develops? I want to know how it behaves when I am called to deal with it in disease." It is the old argument of the narrow type of mind as opposed to the scientific type. Every scientific fact is of value. Such a book of pure science broadens the mind, if nothing more. We can not always separate the facts we can use from those we can not, or, rather, we do not know when a given fact may be of use. The medical profession of today would be far behind what it is if it had never taken an interest in pure science, as distinguished from practical.

ALGER: "REFRACTION"

Refraction and Motility of the Eye. By Ellice M. Alger, M. D., F. A. C. S., Second Edition, Revised. 394 Pages. 125 Illustrations. Philadelphia: F. A. Davis Company. 1920.

An excellent little volume, concise and clear, with an especially interesting chapter on Ocular Malingering. The book is a good example of how much information can be compressed into a small compass by combining brevity with clearness.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Answers to Queries

In answer to Query 6574, "Psychosis": Query 6574 interests me greatly as I happen to know of a case so similar, also the secret reason for divorce shortly after marriage and the simple cure, later, by a slight surgical operation; the trouble being something that infant circumcision would have made impossible. The humiliation made this young man as lifeless as your patient. When his father got at the truth of the matter, the young man was taken to a hospital. For three years, now, he has been a happy, successful business man and married man. Perhaps "6574" is ashamed to tell his doctor.

J. TABOUR,

Harbert, Mich.

Reading Query 6576, "Purpura", recalls a case I had some years ago. I heard of a very dear friend being sick and I paid him a friendly visit. Found him suf-

fering with purpura. I suggested that he take 1/60 gr. strychnine every 4 hours. He then informed me he was going to Baltimore to consult Dr. Osler. After several hours, for his turn to see the doctor, the latter prescribed 100 1/60-gr.-pills of strychnine and his fee was \$10.00. The patient soon recovered.

W. S. CLINE.

Woodstock, Va.

[This is very interesting, not only because of the fact that Osler ordered the same remedy that you had suggested, but also because of the possible etiology of purpura that is demonstrated by the good effect of strychnine.

As you will remember, strychnine stimulates the functions of the adrenal apparatus. We may conclude that, at least in some cases of purpura, there is an insufficient action of the adrenals. Therefore, the good effect of strychnine.—ED.]

Queries

QUERY 6581.—"Vesical Neoplasm." J. F. D., Maryland, is treating a man, forty-nine years old who has a villous papilloma of the bladder. "Exploratory incision showed too extensive disease to be operated on. Wound refused to heal for a long time but is now almost entirely closed. Brought him home in the country, two weeks ago and he has had but one hemorrhage from the bladder and that not a bad one compared to what he had while in the hospital and under treatment. I have been giving him arbutin, gr. 1, t. i. d., also protonuclein t. i. d. He has fairly good appetite, good digestion, bowels are regular. Has pain

all of the time, in right side, leg and back. Is losing flesh slowly and at times is very yellow. No headache. Despondent when alone with his family but quite cheerful and talkative with company. Has to pass urine lying down. Urethra quite tender. The hospital people wanted to use radium and to keep the abdominal wound open for that purpose. While the wound was open, there was as much urine discharged through it as the other (natural) way. Now the surgeons want him to return, and stay in hospital and be treated with radium through the cystoscope. Do you think radium or x-rays

would do any good? Are there any remedies, vegetable, mineral or glandular, that offer any relief or prolongation of life?"

Frankly, considering the extent of the villous growth, we hardly believe that radium or x-rays could do any appreciable good. The course of vesical tumors of this character varies, the average duration of malignant growths being from three to four years. Some patients, however, succumb within a few months. The end approaches rapidly when the typical cachexia of malignant disease is observable and, from that time on, even though there be little hemorrhages, emaciation is rapid. Cancer, of course, kills by exhaustion, hemorrhages, extension and metastasis, though occasionally one gets retention of urine, infection and uremia as terminal conditions.

Were we in charge of this particular patient and knew that the intravesical growth was extensive, we should hesitate to advise radiotherapy. Rest content with keeping the patient as comfortable as possible, under the circumstances, using opiates even, if necessary, towards the end.

Pro tem., you can not very much improve upon your present treatment, though, if the cystitis becomes troublesome, irrigation should be done at frequent intervals. This may, of course, be a somewhat troublesome procedure and occasionally it is impossible, or practically so, to introduce a catheter without setting up hemorrhage.

Very small doses of hyoscyamine may be given internally, or, if the pain is very distressing, suppositories containing extract of belladonna may be used daily.

In all these cases, it is an excellent idea to give a copious saline enema every second day.

You ask us if there are any remedies, vegetable, mineral or glandular, that offer any relief or prolongation of life. The procedures we have briefly outlined should afford material relief but we know of nothing that could essentially prolong the patient's life and it is a serious question whether it would be particularly desirable to do so.

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QUERY 6582.—"Synovitis and Purpura." W. A. L., Michigan writes: "I have been afflicted with knee trouble since I was nineteen years old, which is twelve years ago. At that time, I was taken with purpura hemorrhagica. It caused my knees

to become swollen and extremely sore. Although in the hospital three months, I was never cured and, ever since, have been in bed, from three weeks to three months, two or three times a year. Fourteen different physicians have treated me but I have never received any benefit. Entire rest caused the soreness and swelling to leave for a time and only a little soreness would remain.

"Naturally, I have read your clinical suggestions and find that synovitis compares exactly with my trouble. Have used the cold compresses and iodine, and taken the triple arsenates with nuclein. These have been a great help but the knee does not get well; the soreness and pain are nearly gone but the swelling still remains, I have given it entire rest now for five weeks. Am writing to ask if you would be kind enough to give my case special attention and suggest further procedure. My general health is perfect and no other joints are affected."

The problem you submit as to the best management of your knee which has given you trouble ever since you passed through an attack of purpura hemorrhagica, twelve years ago, is a somewhat difficult one to solve.

It does not appear whether there has been any recurrence of the hemorrhagic trouble or whether the affection of the knee merely is a chronic inflammation caused by the primary disease. This, of course, would have to be considered in outlining a course of treatment.

Purpura, no matter of what form, generally is considered to be due to the action of a poison upon the walls of blood vessels. This poison may develop in the course of infectious diseases. It may be caused by drugs in susceptible subjects; also by autotoxemia of intestinal origin. In many cases, the function of the kidneys is interfered with more or less seriously.

It would be of value to know whether your troubles becomes aggravated during menstruation, and during pregnancy (if you ever have been in that condition). Also, we should like to know whether you have had typhoid fever, acute rheumatism, acute tonsillitis or any other infectious disease.

As to the treatment to be followed; as already said, this depends upon the *cause*. In general, it may be said that attention

to diet and hygiene is necessary, while rest is of great value. Iron, quinine, turpentine and the mineral acids are beneficial in all forms of the disease. One writer (Schamberg) has found turpentine in 5-minim doses given in emulsion with tragacanth and flavored with lemon-syrup, to be particularly efficacious. This also has proved of value in chronic purpura which seems to be existing in your case. The triple arsenates with nuclein, also calcidin, might be of service. Further, calcium chloride in doses of 3 or 4 grains, three times daily, has been recommended highly by various physicians.

The suggestions we have made are just that—suggestions. It is impossible to go further and outline a definite course of treatment without a very thorough examination and detailed study of everything pertaining to your case. If we can aid your physician in this direction, we are at his service.

QUERY 6583.—"Abdominal Tension of Obscure Origin." S. N. D., Illinois, writes: "May I come to you for advice on a type of cases which I seem to have little success with? It is years since I troubled you and your advice then was good and practically helped me out of my dilemma, so I come again with the same hopes and, needless to say, thank you in advance.

"Case No. 1. Young woman of excitable character. Married; three children. Good history except highly-strung and has been operated on for appendicitis. Sudden abdominal distension to the extent of actual ballooning, great pain with accumulated gas that would not pass. Bowels and urine fairly good, except for pain. Patient went to another doctor after two visits, my treatment not being successful.

"Case No. 2. Woman, forty-two years of age. Married; two children (grown-up), by first husband. Called in and found patient with abdomen like balloon, with great pain and full of gas. A flat note over ascending colon and particularly over cecum and appendix, with a keen sense of tenderness. Also sufficient proof of a recent cystitis and still pains from bladder and following ureters. Constipated, nausea and vomiting to a slight extent, with inability to expel gas. I figured on a recurrent appendicitis, but in truth was afraid to operate, fearing that, with a fecal im-

paction and enormous amounts of gas, the stitches might give way and peritonitis follow. Having a cystitis on hand, I would not take the chance. Did I do right not to operate under these conditions?

"I used turpentine stupes; gave Dover's powder, grs. 2 1-2. Used rectal tube with emulsion of asafetida in hot water as enema. Results: Awful cramping after bowel movements, which were watery; yet, impaction still remained. Next day, she menstruated. Gave a combination of: helenin, gr. 1-12, viburnoid, gr. 1-12, dioscoroid, gr. 1-6, gelsemoid, gr. 1-250, avenin, gr. 1-6, scutellaroid, gr. 1-12, hourly with hot water—little effect. Gave ergot and manganese to increase flow, also keeping up the above mentioned formula. Still cramping pains. Next day, repeated asafetida per rectum; 2-grain tablet by mouth. Still distention, pain and flat note over appendix. I thought of adhesions causing the pain as well as gas. Gave tr. cardamoni; urotone compound for kidneys and bladder; hyoscyamus, belladonna and cannabis indica, with but little improvement. Examining the genitals, I noted that the gland at the lower edge of the one labium minus was patent and leaking. I suspected an old gonorrhea.

"Heat, all this time, to abdomen and compound cathartic pills to try to remove the impaction. Finally, with a quart of water, with asafetida every day in the bowels and retained for a time, the flat note disappeared; yet, she still "ballooned." Now the patient said that she felt the gas rolling upward and vomiting followed, after which there appeared to be a dyspepsia of an atonic type.

"By this time the bladder was virtually cleared up, so gave tr. nux vomica, 1-5; tr. gentian, 5; capsicum, 30; tr. rhei, 5; fl. ext. cascara, 5; elix. taraxacum, q. s. at 90. Teaspoonful after meals; repeat in one hour if necessary. This improved matters; but, until bowels moved, there was great cramping. Even now, the ballooning would disappear. Again, I repeated the helenin, viburnoid, dioscoroid, gelsemoid, avenin and scutellaroid combination.

"Gas persisting I gave phenyl salicylate, grs. 10, bismuth subnitrate, grs. 30, charcoal, grs. 10, one to two hours after meals; also soda mints. A little further improvement followed but the patient complained

greatly of acid eructations. I tried to neutralize it with rhubarb, sodium bicarbonate, magnesium carbonate and cardamom. Still there was gas at 5 p. m., pain starting in stomach and lasting through the night. Then I increased the bismuth formula and ordered, at 4 p. m., a glass of milk taken slowly, for the stomach to have something to work on and absorb the acid. Still gas and distention. By way of anticipating other trouble, the uterine sedative was ordered again.

"Feeling that liver was none too good, I gave chololithine, morning and night, and a nux vomica and gentian combination before meals. Yet, distention would not subside. Pains are by no means as severe as before; however, they persist for hours, sometimes.

"Now, if you can advise me on these cases of persistent gas and distention, you are surely entitled to my gratitude; for, I feel like cussing and hope by your advice not to be caught on the next case. I have read my head off and thought my head off, but am up against a brick wall. So, please advise, and as soon as you can. Believe me, your letter will be a relief. Have had several of these cases and every one a failure. Otherwise, I have been exceptionally successful. These cases upset my 'apple-cart.'

We do not wonder that the cases you describe "upset your apple-cart." Under the circumstances, it would be quite useless for us to refer you to the very extensive and contradictory literature on the subject, for you state that you have "read your head off" and still find yourself "up against a brick wall."

Unfortunately, Doctor, the causative conditions in these cases are not always the same, and, therefore, the line of treatment that would prove effective in one instance will fail entirely in another.

In the first case (young woman, of excitable character), you do not state how long after appendectomy the sudden abdominal distention occurred, and, with the limited data at our disposal generally, we are unable to comment with intelligence.

In the second case (woman of forty-two), we would have given physostigmine to effect, and administered a full dose of castor oil, with 1 minim of *oleum tigillii* added. In nearly all tympanitic conditions,

physostigmine is our most reliable remedy. Not infrequently, dioscoroid (*dioscorea villosa*) may be given in alteration, with advantage.

In very many of these cases, high enemata (sometimes, half a pint of kerosene, followed by water), and the hypodermic administration of hyoscine, morphine and cactin will produce astonishing results; but here, again, much will depend upon the basal pathology.

We believe that you were perfectly right in hesitating to operate, under the conditions which obtained in this particular patient. In this case we would not have given milk, but would have pushed sodium bicarbonate, and ordered it in alternation with oil of cajuput and vegetable charcoal. We believe that properly prepared butter-milk would have given better results than milk, even with lime water. Do not forget the value of clam bouillon, in these cases.

In the next case, empty the bowel as thoroughly as possible and push physostigmine alone; then, for a time, administer some such combination as: berberine hydrochloride, gr. 1-6; juglandoid, 1-6; physostigmine salicylate, gr. 1-500; strychnine sulphate, gr. 1-64; capsicum oleoresin, gr. 1-64—one of the most useful peristaltic stimulants at our disposal.

Not infrequently, (especially where there is a concomitant cholecystitis), bilein, in combination with the sulphocarbolates, can be given with advantage.

It is a question in this writer's mind whether the use of strychnine is very advisable.

We sincerely wish that we were able to serve you more intelligently but, if you, on the ground, find it difficult to arrive at definite conclusions, we at this distance, with the limited data at our disposal, are even more hopelessly at sea.

QUERY 6584.—"Hodgkin's Disease?" W. H. B., Georgia, describes the case of a white boy, ten or twelve years of age. Has been under treatment at a university hospital but was not benefited any. "In February last, he had severe tonsillitis and a gland on left side of neck enlarged about size of partridge egg. The tonsils yielded readily to treatment, but he then had pha-

ryngeal abscess. The glands on the neck are very much enlarged and do not seem to be benefited by any treatment. He was put on Fowler's solution, but for some reason this did not seem to agree with him. He vomited nearly everything he ate while taking the Fowler solution. I then put him on syrup of hydriodic acid and it agrees with his stomach. He now has a fairly good appetite. Tuberculin tests were made at hospital. First test negative; second positive; but he does not run any temperature, except when troubled with throat. I think that he has Hodgkin's disease. Now, he is a sight to look on. I have never seen any one with lymphatic glands enlarged like his. Pulse has run 160 to 180 with no rise of temperature but, since putting him on the acid, his pulse is about 120."

It is difficult for this writer to prescribe for your patient without a more definite knowledge of underlying conditions. An examination of the blood would, of course, prove informative.

In Hodgkin's disease there is progressive anemia and, as you are aware, one chain of glands after the other usually becomes involved. The mere fact that the tuberculin test is positive in this case, does not necessarily militate against a definite diagnosis of Hodgkin's, and, though we do not yet really understand the pathology of pseudoleukemia (Hodgkin's disease), it is more than likely that the tubercle bacillus is the causative agent in the majority of cases.

The early history in this case, however, leads us to wonder whether you have not a rather unusual form of tuberculous adenitis. Were we in your place, we would have one of the glands extirpated, and, if the tonsils are still in place, we would certainly have them removed.

We should be inclined to give this boy syrup of iron iodide, in alternation with arsenic in its most acceptable form. Evidently, he can not take Fowler's solution. You might try arsenic sulphide with advantage or you may give sodium cacodylate intramuscularly or intravenously. Very excellent results sometimes follow such a procedure. Nuclein should also be pushed.

You do not state whether, at the present time, the glands are hard or fluctuating, or state whether those in other parts of the

body (axillæ, groin, mediastinum, etc.) are enlarged.

If you will give us further light on this subject, we may be in a position to aid you more intelligently.

QUERY 6585.—"Morphea Guttata." O. W. H., Illinois, is treating a case of morphea, or scleroderma, in a boy seven years old. He finds the literature rather meager as to any promising remedial agents and asks for suggestions.

We are wondering whether you have to deal with a morphea guttata (superficial circumscribed scleroderma) or scleroderma of the generalized or progressive type.

Morphea guttata, "white-spot disease," is most often observed in young females tainted with tuberculosis, the lesions appearing on the upper chest, shoulders, nape of the neck and perigenital region. Radiotherapy and the administration of thyroid extracts have proven beneficial in several cases. The writer would also be inclined to give arsenic iodide in small repeated doses.

In the more severe forms of scleroderma, treatment, unfortunately, proves ineffectual; in fact, each case will have to be treated according to its indications. Here, again, successful results are occasionally secured from the administration of thyroid persistently given, and the salicylates have proven beneficial in many cases, as have the iodides, arsenical preparations, etc. Here, also, the writer would recommend arsenic iodide or sodium cacodylate intravenously. Hydrotherapy, massage, mud-baths, use of the continuous current, and the application of salicylic acid or salol ointments, may be tried. Mercurial plasters, as you are aware, have a classical reputation.

In the partial sclerodermas, negative-pole electrolysis may be recommended, punctures being made at frequent intervals and only weak currents used.

QUERY 6586.—"Morphine in Locomotor Ataxia." C. H. B., Iowa, presents the following case for advice as to treatment:

"Male, sixty-two years of age. Developed locomotor ataxia two years ago, after a course of antisyphilis treatment at the Mayo Clinic; also a clearcut joint (hip). Has been morphine addict for fifteen years. He

now has severe pain in back and neck, relieved only by morphine. Have been giving him mercury and iodides. Tried neosalvarsan but he did not take it well. He takes 3/4 grains of morphine daily now.

"I want to know whether or not I am justified in continuing the opiate for the relief of pain. His general condition is very poor and I have hesitated to refuse it on that account, especially in view of the fact that he has been to a number of first-class specialists without getting any relief. Is there any substitute for morphine that would be likely to relieve him?"

In this writer's opinion, no drug can satisfactorily replace morphine in the case you briefly describe. You might, of course, try small doses of hyoscine, morphine and cactin, substituting this combination for a time for the single salt.

Benzyl benzoate is not likely to prove effective and, while chloral may be given and sometimes relieves the patient considerably, we are inclined to think that its continued administration proves more injurious than morphine in moderate dosage. Considering everything, we believe you are perfectly justified in continuing the use of an opiate in this case. If, for any reason, however, such procedure seems undesirable, we suggest that you try acetanilid, acetphenetidin or antipyrine, or, perhaps, cannabis indica, in alternation with hyoscine or hyoscyamine.

QUERY 6587.—"Wild Nasturtium in Ivy Poisoning." H. R. L., Iowa, writes: "For many years, I have been spending my vacation at a lake in Dickinson County, Iowa, and every year I come in contact with poison ivy. All I use or prescribe is the bruised leaves or stalk of the wild nasturtium, which soon affords relief. The stalk is clear and very juicy and, if one could secure the properties it possesses, it would be a great blessing to any an unfortunate."

Later: "The plant I referred to grows as high as four feet. The flower which is yellow and the same shape as our nasturtium, only smaller, comes out of the stalk just above the leaf."

The writer wonders whether you refer to *nasturtium officinale*, i. e., water cress,

when you speak of the "wild nasturtium." This plant contains a sulphureted essential oil analogous to that of mustard. A similar volatile oil is found in *capsella bursa-pastoris* (shepherd's purse), which we have also seen recommended in the treatment of dermatitis venenata. Wild pepper-grass and various other species of *lepidium* has also been referred to as useful.

QUERY 6588.—"Mammary Nodules." E. C. H., Minnesota, is treating a woman aged forty-two; family and past history negative, who, since the birth of her last baby (now six years old), has had a slight discharge from both breasts. About three years ago, she expressed some pus (?) from breasts and asked her physician about it. He told her not to worry as that would dry up in time. She has a mass the size of a walnut in each breast. Some soreness at times.

Our correspondent asks: "Should I advise her to submit to an exploratory operation, to get section for microscopic examination, or wait for future developments? I saw her this morning for the first time and she seems unable to tell me whether the mass is growing or not."

We are inclined to believe, from your description, that a malignant condition does not obtain in the case under consideration. In the first place, if there is still a discharge, a specimen should be submitted for examination.

It is possible that a low-grade infection of the mammary glands exists and it may be necessary to incise the small swellings of which you speak. You do not give us any definite information as to the exact location of the indurated areas, nor do you state whether they are movable or fixed. Of course, all growths or enlargements on or of the breasts of a woman of this age must be regarded with suspicion, but it is rare indeed for both mammae to be involved. Small nodules, especially if accompanied by slight discharge of pus from the nipple, are not likely to prove of serious import. However, to be on the safe side, it might be well, should the condition not clear up under ordinary measures, to submit a section for microscopical examination.